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*Commonwealth of Massachusetts
Information Technology Division*

GOVERNMENT DOCUMENTS
COLLECTION

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**Legislative Briefing for
House and Senate Committees
on Science and Technology**

Fourth Briefing

February 3, 1999



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THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE DEPARTMENT

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ARGEO PAUL CELLUCCI
GOVERNOR

98 DEC 14 AM 7:41
SECRETARY OF STATE
REGULATIONS DIVISION

BY HIS EXCELLENCY

ARGEO PAUL CELLUCCI
GOVERNOR

EXECUTIVE ORDER NO. 408

MEETING THE YEAR 2000 CHALLENGE

WHEREAS, the Commonwealth of Massachusetts relies extensively on computer and communications technologies to provide a broad range of services necessary for the health, welfare, and safety of its citizens; and

WHEREAS, many computer and communications systems, including hardware, software, and firmware, were designed in such a way that they cannot accurately process date information for dates after December 31, 1999; and

WHEREAS, Year 2000 failures in the Commonwealth's mission critical and essential computer and communications systems could have serious consequences for the health, welfare, and safety of the citizens of the Commonwealth; and

WHEREAS, the Commonwealth has already devoted substantial human, financial, and technical resources over the past several years to address the Year 2000 problem and has made significant progress in this regard; and

WHEREAS, the Commonwealth must be vigilant to minimize potential Year 2000 disruptions in its computer and communications systems;

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NOW, THEREFORE, I, Argeo Paul Cellucci, Governor of the Commonwealth of Massachusetts, by virtue of the authority vested in me as Supreme Executive Magistrate, do hereby order as follows:

Section 1: Definitions

For purposes of this Executive Order, the following terms shall have the following meanings:

“State agency”, any state agency as defined in section 1 of chapter 6A of the General Laws;

“Year 2000 compliant”, information technology that accurately processes date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, the years 1999 and 2000, and leap year calculations. Year 2000 compliant information technology, when used in combination with other information technology, shall accurately process date/time data if the other information technology properly exchanges date/time data with it.

Section 2: Declaration of Policy

The chief operational priority for all state agencies shall be to attain Year 2000 compliance on or before July 1, 1999.

The head of each state agency shall be responsible for, and will be held accountable for, Year 2000 compliance activities and performance within his or her state agency. In cases where attaining Year 2000 compliance is not possible, or where there is an appreciable risk that a state agency system will not be Year 2000 compliant, the agency heads shall be responsible for, and will be held accountable for, devising and implementing a contingency plan for ensuring uninterrupted service delivery.

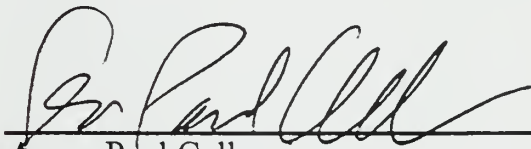
The secretary of each executive office and the director of each department shall appoint a senior official to oversee and coordinate the Year 2000 compliance and contingency planning activities of each agency within his or her secretariat or department. All secretaries and directors shall be responsible for, and will be held accountable for, overseeing and coordinating successful contingency planning for each agency within their secretariats or departments.

Section 3: Oversight and Enforcement of Year 2000 Remediation and Contingency Planning

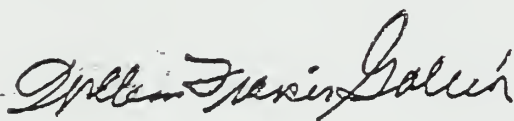
The Secretary of Administration and Finance is hereby directed to take appropriate measures to enforce Section 2 of this Executive Order. All executive agencies, including specifically the Fiscal Affairs Division and the Information Technology Division, are hereby directed to take such measures as the Secretary of Administration and Finance may require to assist him in ensuring that all state agencies attain Year 2000 compliance.



Given at the Executive Chamber in Boston
this 14th day of December in the year one
thousand nine hundred and ninety-eight.



Argeo Paul Cellucci
Governor
Commonwealth of Massachusetts



William Francis Galvin
Secretary of the Commonwealth

GOD SAVE THE COMMONWEALTH OF MASSACHUSETTS

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Update on Outreach to Cities, Towns, and Local Organizations

Commonwealth of Massachusetts Information Technology Division Year 2000 Program Management Office February 3, 1999

The ITD Y2K Program Management Office (PMO) has been actively involved in Outreach activities to cities, towns, and other local and municipal organizations. The following is an update of our outreach activities since September, 1998.

- The PMO has been invited to speak to a number of professional organizations in an effort to raise awareness at the local level. In particular:
 - The Massachusetts Water Resources Authority,
 - The Massachusetts Food Association,
 - The Massachusetts Contributory Retirement System,
 - The North Central Massachusetts Chamber of Commerce,
 - The Massachusetts Emergency Management Agency,
 - The Massachusetts Chiefs of Police Technical Committee ,
 - The Massachusetts Municipal Association,
 - The Computer Museum, and
 - The Federal Emergency Management Agency.
- The PMO has provided written responses to a number of concerned citizens and groups that have contacted the PMO to request information on the status of the Commonwealth's Y2K readiness and the readiness of the regulated community. The PMO has responded in writing to every request with a description of what the Commonwealth is doing to prepare for Y2K as well as what the regulatory agencies are doing to ensure continuation of essential services.
- The PMO regularly publishes Y2K documentation and makes them available to not only state agencies but also to anyone with access to the Internet. The PMO is reaching out to the citizens of the Commonwealth through continued updates of its Y2K web site. The PMO staff stay current on the latest information regarding Y2K and regularly publish articles in the "Beacon", the official publication of the Massachusetts Municipal Association (MMA), and the Information Technology Division (ITD) quarterly newsletter.

Many State agencies are actively involved in outreach to the cities, towns, and local and municipal organizations. For example:

- The **Department of Telecommunications and Energy** within the Office of Consumer Affairs issued a Year 2000 survey questionnaire in June 1998 to all electric, gas, water, telecommunications, and cable companies under their jurisdiction. Based on the July, 1998, results of the surveys, DTE sent follow-up requests to these companies for more detailed Y2K project information. Beginning September 25, 1998, DTE sponsored technical workshops for the utility companies to discuss their readiness and to share information. DTE is also requiring the utilities to submit quarterly Y2K status reports. . DTE will continue to survey entities involved in the electrical generation and distribution process, as well as conducting technical workshops . Other activities that DTE has identified include:

- Conducting a special technical workshop for municipalities with electrical generating/distribution facilities.
- Requiring utility companies to distribute general Y2K information to consumers by way of a "bill insert".
- Working closely with other state and federal agencies involved in monitoring and regulating the utilities, such as the US Department of Energy, ISO New England and the North American Reliability Council.
- Attending Bell Atlantic's quarterly customer interface workshops; and
- Determining and ensuring that companies' and municipalities' Y2K efforts and resources are adequate.

In February 1999, DTE will request utility company CEO "sign off" of their respective Y2K readiness plans. In addition, utilities will be required to submit formal contingency plans to DTE by the end of the first quarter of 1999. Interface and monitoring activities will continue throughout 1999 to evaluate utility efforts as well as to provide assistance as needed.

- The **Division of Banks** within the Office of Consumer Affairs began an education campaign with the Commonwealth financial institutions in early 1997. On January 22, 1999, the **Division of Banks** published regulations (**209 CMR 51.00**) to establish minimum operational standards for banks and credit unions with respect to year 2000 readiness. These regulations also require direct involvement of the Boards of Directors of all State chartered banks and credit unions in reviewing Y2K plans and readiness. The **Division of Banks** has also published a set of guidelines specifying actions needed to reach Y2K readiness, testing of these actions and preparation of both business resumption and contingency plans. Failure to properly follow these regulations can result in the revocation, suspension or non-renewal of licenses.
- The **Department of Environmental Protection** has required regulated entities to take whatever steps are necessary to ensure continued full compliance with environmental laws and regulations. This responsibility involves identifying and remediating any Year 2000 problems that threaten full compliance with environmental laws and regulations. DEP will not accept Y2K excuses as constituting force majeure or other defense against environmental enforcement for noncompliance. This applies both to Y2K problems arising from a regulated entity's own equipment and facilities as well as to problems stemming from a vendor's facility or equipment. Although failure to be Y2K compliant is not itself a violation, DEP will consider failure to comply with environmental requirements because of Y2K problems to be violations, and may enforce against those violations.
- The **Department of Revenue** began an awareness campaign two years ago through speaking engagements at various meetings and conferences of local officials, and regularly publishes Y2K articles in their monthly newspaper "Cities and Towns". To more formally assist with outreach to the Commonwealth's communities, the Secretary of Administration and Finance, through the Department of Revenue, has expanded the role of the **Division of Local Services (DLS)** to include a Year 2000 coordination office which will work with various state and local agencies, in an attempt to ensure that all Commonwealth cities, towns, districts and local authorities have assessed potential Year 2000 vulnerabilities. DLS is also working to ensure that local communities have ready access to the best information available on relevant compliance strategies. Of particular concern are small towns and districts that lack paid technical staffing and that depend on part time elected officials for management decisions. This program began in December 1998 and is expanding as needs dictate and as resources permit. The program elements are:

- **Small community, on-site assistance:** State assisted inventory, assessment, and planning (redemption/replacement, risk management, contingency) matched with local funding of redemption/replacement/verification strategy.
- **Public Internet tracking of community progress and plans:** All cities and towns, districts, regional agencies and councils of government plus related vendors and suppliers.
- **Workshops:** Coordinated with small community assistance phases but open to all local government entities.
- **Publications:** Related to overall outreach objectives and workshop topics.

DOR has mandated that, in order to have a FY99 tax rate set, communities must submit a report from their CFO on the Y2K compliance status of all major municipal computer systems.

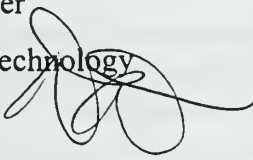
- **The Massachusetts Highway Department**, within the Executive Office of Transportation and Construction, has physically inventoried 1052 state owned traffic signals and met with our three primary suppliers of these signals. Information and testing provided by the suppliers indicates that traffic signal malfunctions will not result in traffic safety problems. This premise is supported by the Federal Department of Transportation in their latest statement regarding traffic signals. During the inventory process, approximately three percent of our signals could not be associated with a supplier and they are being considered as sub standard and being replaced. A contingency plan is in the process of being developed and is scheduled for completion in February 1999. The Massachusetts Highway Department is preparing to communicate all pertinent information to the cities and towns of the Commonwealth.
- **The Massachusetts Emergency Management Agency (MEMA)**, has initiated planning activities in conjunction with Commonwealth cities and towns, the state police and other emergency management resources to anticipate responses that may be required as a result of Y2K impact to citizens. MEMA is conducting a series of workshops in the four emergency planning districts across the state in March 1999 to provide education, increase citizen awareness, and further communications with officials of cities and towns.
- **The Information Technology Division legal department** has been providing assistance on the legal issues raised by the Y2K problem. In December, the general counsels from ITD and A&F conducted two Y2K legal forums that were attended by nearly 100 lawyers from state agencies, independent authorities, and municipalities. The purpose of these forums was to raise awareness, provide background on the Y2K problem, and discuss the legal aspects of Y2K as they relate to the public sector. In addition to these general sessions, ITD's general counsel has attended several meetings with agency and secretariat lawyers to discuss Y2K. Another series of Y2K legal forums will be held in mid-February, and periodically thereafter. Finally, ITD is in the process of establishing a blanket contract for Y2K legal services, so that agencies will have a convenient way to secure the advice of private law firms that have developed expertise in these matters.
- On October 30, 1998, the **Office of State Auditor** issued a report as a result of their review of Y2K readiness for Commonwealth agencies and Authorities. This report was based on a detailed survey, as well as on site interviews and reviews. The PMO is in the process of comparing these results with information independently gathered to insure a common position on Y2K readiness.

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MASS. DEPARTMENT OF REVENUE

DIVISION OF LOCAL SERVICES

TO: Joseph J. Chessey, Jr., Deputy Commissioner
FROM: David L. Davies, Director of Information Technology
COPY: 
DATE: 1/4/1999
TOPIC: **Y2K LOCAL OUTREACH PROGRAM - STATUS REPORT**

Direct Assistance Pilot Program

As of today, we have inventoried eleven of seventeen communities in the pilot program (another is scheduled for next week and one is in the process of being scheduled). Four towns have not responded to the opportunity.

Preliminary findings conform to our expectations: there is a wide range of Y2K compliance awareness and activity in smaller communities. Many non-compliant systems are in place with no plans to upgrade or replace. On the other hand, some smaller communities have seriously assessed their vulnerabilities and have procured solutions. All communities that responded to the pilot appeared to be genuinely appreciative of the state assistance, regardless of their degree of compliance.

Four different DLS staff persons were able to inventory town systems in about four hours per community -- our original estimate. There is usually follow-up work by phone, but the pilot experience indicates that successful expansion of the program to all communities under 5000 population is realistic.

We are prepared to highlight the program at next week's Y2K workshop at the MMA Annual Conference and the pending front page article for next month's *City & Town* discusses the Local Outreach program, the pilot, and DLS plans to expand direct assistance.

Internet Clearinghouse

DLS staff have developed a preliminary database model and are mocking up a static Website that can be activated in January, to be replaced by the Oracle-driven site the following month.

W.T. Chen declined to submit a proposal on the Oracle project, citing lack of appropriate staff resources on short notice. Oracle Consulting is preparing a proposal and freeing up two consultants for this work. I have stipulated that we want these consultants to work with DLS and ISO staff so that DOR staff can expand and enhance this technology for this and other projects. ISO stands ready to implement this Clearinghouse on their new Oracle Web and database servers and to collaborate with DLS staff in administering the database.

Vendor/Supplier Outreach

We want to involve private firms supplying products and services to local governments to the fullest extent possible in reporting their compliance status through the Clearinghouse and publications. DLS & ITD lawyers are currently reviewing a draft letter to invite their reporting of compliance testing and status. We would like to send that letter out this week to the vendors already identified.

O-3 Staffing

We are processing forms for a Project Manager, one full time and one part time inventory specialist, and two graduate student interns. The DOR tax and background checks will take a couple of weeks at best.

Publications

1 We have begun planning on one specific publication -- a looseleaf subscription service that will make continuously updated information from the Clearinghouse available to citizens and officials who do not have access to the Internet, i.e. one copy for each municipal library and clerk's office.

Workshops

We have had preliminary discussions with Emergency Management on coordinating outreach workshops on contingency planning. Problems with emergency services, electrical power, and water supply/sewer services are typically the greatest concerns of citizens in Y2K forums.

Schools, Housing Authorities, and Other Local Entities

2 We have contacted various knowledgeable officials to verify the status of compliance awareness and outreach activities. Follow-up will occur after the Direct Assistance and Clearinghouse projects are fully on track.

Dear (*VENDOR*)

The Division of Local Services will soon activate a Local Government Y2K Clearinghouse Website. This Website will present constantly updated information on local government Y2K compliance with links to vendor information, Internet sites, and compliance certification letters. Attached is a letter from your firm that states the compliance status of your products relative to Massachusetts cities and towns. Local Services wishes to publish the most current and accurate information relative to your firm's products and services to guide local officials seeking compliant solutions. If, therefore, you provide this office with an updated certification statement, a detailed breakdown of compliance relative to different versions or models, specifics on where and how products were tested, or other information or links appropriate to this Clearinghouse, we will substitute existing data with the updates.

Statements of Y2K compliance can go beyond the products and services sold to local governments. It can include, for example, whether a firm has assessed its own vulnerabilities relative to internal systems and/or external suppliers and wishes to share that analysis with its customers.

Local Services will not publish vendor specific information unless it has been provided by the vendor either directly to this Department, in correspondence with Massachusetts cities and towns, or through its general publications or Internet site. If your product relies on third party technology, such as a database system or report writer, Local Services may report on that vendor's compliance status and provide a link to your product.

In general, the Division of Local Services wishes to assist local governments and the vendor community in providing an efficient resource for identifying tested solutions and Y2K compliant companies. We welcome any and all comments and suggestions on how to make this project fulfill that objective while addressing any concerns you may have.

Yours truly,

David L. Davies
Director of Information Technology

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DLS Pilots Y2K Outreach

During the past two years the Division of Local Services (DLS) has been alerting cities and towns to the potential of computer system failures because of Year 2000 (Y2K) programming errors. While the early focus of those worrying about the millennium bug was on large federal and state agencies, the spotlight has shifted to municipal government. Surveys show the public places a high priority on uninterrupted vital municipal services. With just 11 months left, it is time to make the final preparations.

DLS has organized an ambitious Y2K outreach program to municipalities. The program will provide on-site staff assistance to small towns in assessing vulnerabilities and create a central Web-based clearinghouse for compliance data on products and community status.

Y2K Outreach Program

DLS staff has tested the outreach program by providing assistance to small towns that do not have paid technical staff. Outreach staff is conducting inventories in municipal governments, school districts, housing authorities, utility districts, etc. The community must agree that it retains responsibility for the accuracy of data collected and the appropriateness of the proposed solutions.

The program includes:

- hardware, software, and embedded device inventories,
- vendor management program development,
- non-compliant system assessments,
- remediation or replacement strategy recommendations and
- community specific risk management and contingency plans.

For outreach recommendations to be beneficial they should be part of FY2000 budget deliberations and creation of Y2K contingency accounts. DLS began testing the program last month in 17 of the 100 communities with populations under 5,000. At this writing half of the inventories are done and preliminary community results show:

- many have Y2K vulnerabilities because they rely on older non-compliant vendor programs in the interest of economy,
- communities are aware of Y2K issues to varying degrees and are purchasing hardware and software with compliance in mind,
- many assume Y2K compliance relates only to financial systems consequently public safety, utilities, etc., receive less scrutiny,
- suppliers and service vendors are seldom queried on their Y2K status, and
- many communities trust verbal compliance assurances on products without specification of what compliance means.

DLS believes that it can, with full community cooperation, inventory all 100 communities. Also, once those goals are met we will offer assistance to larger communities.

Web-based Clearinghouse

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Currently DLS is creating an Internet Y2K compliance clearinghouse. Information gathered by DLS will be posted to a database that can be searched by community, department, product, vendor, and downloaded. For example, someone discovers that an embedded chip in a specific model water pump is not Y2K compliant, and DLS posts that information. A local official elsewhere is worried about water system compliance and searches by *water supply* or *pump* or *vendor name*. The searcher could discover the water system's compliant status, where else it is used in Massachusetts, the vendor's proposed solution, their website, email address, and product certifications. Data on alternative compliant pumping systems can also be found. While the clearinghouse website is under construction we will create a static (non-searchable) Internet site to get this information out as soon as possible. As with all Year 2000 programs, time is of the essence.

Plans also include a Year 2000 Compliance Web page for each community with a message from the community's executives. There will be links to the community's Y2K assessment and contingency plans. Cities, towns and businesses are welcome to link to their sites. The clearinghouse can also be a procurement resource as the search for solutions intensifies.

Workshops and Publications

DLS is working with other agencies and associations to organize regional workshops for non-technical local leaders. Workshop topics and related publications will focus on topics, like contingency planning, that relate to the decisions facing local officials and the concerns of their constituents as the year 2000 approaches.

Media attention will increasingly make Y2K preparedness an issue of citizens' concern. Some larger jurisdictions in the country are preparing Y2K contingency plans similar to emergency management planning for a blizzard or hurricane. Individuals and citizen groups throughout Massachusetts are already considering what precautionary steps to take in anticipation of whatever happens. Because DLS knows that many Massachusetts communities use similar systems and face common problems, we are working to simplify the search for compliance verifications or common solutions. Well informed municipal officials can more effectively guide their communities through a unique period of time in which experts disagree and the average citizen does not know what to think. Verification of local systems is a small part of the whole problem, but a very important part.

Year 2000 Compliance Local Outreach Program

Terms of Engagement

The Commonwealth will provide direct assistance in preparing inventories, assessments, and plans relative to Year 2000 compliance of systems, devices, vendors, and suppliers. The community hereby accepts this assistance under the following three conditions:

1. The community shall retain full responsibility for the accuracy and completeness of inventories and assessments developed with and without assistance of analysts provided by the Commonwealth. The community shall be fully responsible for the content of any plans or recommendations prepared with or without the assistance of Commonwealth analysts for community review and approval once those plans or recommendations have been duly adopted by the community.
2. The community shall take reasonable steps to make appropriate officials available for consultation, initial and follow-up, in order to ensure that assistance can be provided in an efficient and responsive manner.
3. If tests are run on community systems, with the explicit permission of the responsible local officials, it is the community's responsibility to ensure that appropriate precautionary steps, such as verified full system backups, have been taken. In no event shall the Commonwealth be liable for claims by the community or third parties that such tests have damaged hardware, software, or data involved with those systems.

FOR THE TOWN OF _____

DATE _____

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Massachusetts Division Of Banks

Year 2000 Operational Safety and Soundness Standards Final Proposed Regulations Effective January 22, 1999

209 CMR 51.00 - Year 2000 Safety and Soundness Standards

The following Sections are listed below:

- 51.01: Purpose and Scope
- 51.02: Definitions
- 51.03: Year 2000 Readiness Minimum Standards
- 51.04: Sanctions
- 51.05: Severability
- 51.06: Sunset

51.01: Purpose and Scope

The purpose of 209 CMR 51.00 *et seq.* is to establish minimum operational standards for banks and credit unions with respect to Year 2000 Readiness. The safe and sound operation of banks and credit unions requires that management take appropriate and timely steps to ensure that record-keeping and other mission critical systems are Year 2000 compliant.

209 CMR 51.00 also sets out the range of remedial or enforcement actions and sanctions that may be imposed by the Division for banks and credit unions that are not in compliance with federal guidelines and safety and soundness standards relative to Year 2000 readiness. The provisions of 209 CMR 51.00 are minimum record-keeping or operational standards for state-chartered banks and credit unions. These provisions are independent of, and in addition to, the Division's authority to take any other remedial action under applicable state law.

51.02: Definitions

As used in 209 CMR 51.00 *et seq.*, the following words shall, unless the context otherwise requires, have the following meanings:

Bank. A bank shall include a state-chartered savings bank, co-operative bank or trust company or any other association or corporation, as defined by M.G.L. c. 167 § 1, that is subject to supervision and examination by the Division.

Credit Union. A credit union as defined by M.G.L. c. 171 § 1, that is subject to supervision and examination by the Division pursuant to M.G.L. c. 167 § 2.

Division. The Division of Banks, including the Commissioner of Banks.

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Federal Bank Regulatory Agency. The Federal Deposit Insurance Corporation, the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency, the Office of Thrift Supervision, or the National Credit Union Administration or any other applicable federal bank regulatory agency.

Federal Year 2000 Guidelines. The written guidance papers issued by the FFIEC in the areas of Year 2000 project planning, renovation, testing, contingency planning, and the impact of the century change date. The term includes the eight guidance papers published as of October 15, 1998 and any subsequent guidance papers issued by the FFIEC. The Federal Year 2000 Guidelines provide guidance to federally insured depository institutions and set out the federal bank regulatory agencies' supervisory policies relative to such depository institutions' minimum Year 2000 remediation requirements.

Federal Year 2000 Safety and Soundness Guidelines. Written standards promulgated by the federal bank regulatory agencies under 12 U.S.C. § 1818p-1. These "Interagency Guidelines Establishing Year 2000 Standards for Safety and Soundness" became effective upon their October 15, 1998 publication. (63 *Federal Register* 55,479 (1998)). The guidelines are judicially enforceable under the "prompt correct action" provisions of 12 U.S.C. § 1818o.

FFIEC. The Federal Financial Institutions Examination Council, a federal body established pursuant to 12 U.S.C. § 3301 *et seq.*, which coordinates and promotes uniform supervisory and examination policies among the federal bank regulatory agencies and state bank supervisors.

51.03 Year 2000 Readiness Minimum Standards

(1) All banks and credit unions shall take all necessary steps and measures to adhere to and implement the Federal Year 2000 Guidelines.

(2) All banks shall be in compliance with the Federal Year 2000 Guidelines and Federal Year 2000 Safety and Soundness Guidelines at all times. Failure to review, renovate and test internal and external mission critical systems; or to develop and implement business resumption or remediation contingency plans; or to appropriately identify customer risks in accordance with the Federal Year 2000 Safety and Soundness Guidelines shall trigger M.G.L. c. 167 §22. Such failure shall establish that a bank: (a) is "conducting business in an unsafe and unauthorized manner"; (b) is transacting business in an "unsound or unsafe condition"; and (c) has violated a "law of the commonwealth" within the meaning of M.G.L. c. 167 §22.

(3) All credit unions shall be in compliance with the Federal Year 2000 Guidelines at all times. Failure to review, renovate and test internal and external mission critical systems; or to develop and implement business resumption or remediation contingency plans; or to appropriately identify customer risks in accordance with the Federal Year 2000 Guidelines shall trigger M.G.L. c. 167 §22. Such failure shall establish that a credit union: (a) is "conducting business in an unsafe and unauthorized manner"; (b) is transacting business in an "unsound or unsafe condition"; and (c) has violated a "law of the commonwealth" within the meaning of M.G.L. c. 167 §22.

(4)(a) Banks. The Division, in its discretion, may impose any or all of the sanctions under 209 CMR 51.04, under the following circumstances:

1. If a report of examination conducted by the Division or a federal bank regulatory agency determines that a bank is not in compliance with the Federal Year 2000 Guidelines by virtue of receiving a "Needs to improve" or "Unsatisfactory" rating during or after the mission critical systems testing stage;
2. The bank fails to take immediate and satisfactory corrective action as directed by the Division or a federal bank regulatory agency; or
3. The bank is not in compliance with the Federal Year 2000 Safety and Soundness Guidelines and has been issued an order pursuant to 12 U.S.C. § 1818o.

(b) Credit Unions. The Division, in its discretion, may impose any or all of the sanctions under 209 CMR 51.04, under the following circumstances:

1. If a report of examination conducted by the Division or a federal bank regulatory agency determines that a credit union is not in compliance with the Federal Year 2000 Guidelines by virtue of receiving a "Medium" or "High Risk" rating;
2. The credit union fails to take immediate and satisfactory corrective action as directed by the Division or a federal bank regulatory agency; or
3. The credit union is not in compliance with a Year 2000 regulatory directive.

(c) Corrective action. Failure to take satisfactory corrective action shall include, but is not limited to, failing to submit an acceptable corrective action plan or submitting a corrective plan that is rejected or deemed unacceptable by the Division or by an applicable federal bank regulatory agency or the issuance of a "safety and soundness order" pursuant to 12 U.S.C. § 1818o.

51.04 Sanctions

Failure to comply with 209 CMR 51.03 shall constitute grounds for the imposition of the following sanctions:

- (a) the issuance of an order pursuant to M.G.L. c. 167 § 3;
- (b) the suspension or removal of officers, directors or trustees pursuant to M.G.L. c. 167 § 3;
- (c) the notification, certification or consolidation of an excess deposit insured savings bank, co-operative bank or credit union pursuant to St. 1934 c.43; St. 1934 c.73; or St. 1961 c.294, respectively;
- (d) the appointment of a conservator pursuant to M.G.L. c. 172 § § 40-46, or other applicable statutes;
- (e) the taking possession and control of the bank or credit union pursuant to M.G.L. c. 167 § 22; or,
- (f) the appointment of a receiver pursuant to M.G.L. c. 167 § 26 or M.G.L. c. 167 §26A, as the case may be.

51.05: Severability

If any provision of 209 CMR 51.00, or the application thereof to any person or circumstance is for any reason held to be invalid, the remainder of 209 CMR 51.00 and the application of such provisions to other persons or circumstances shall not be affected thereby.

51.06: Sunset

209 CMR 51.00 shall expire on December 31, 2001.

REGULATORY AUTHORITY: M.G.L. c. 167 §6; c. 30A § 8.

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Massachusetts Division Of Banks

**Proposed Licensee Year 2000 Operational Safety and Soundness Standards
Regulatory Bulletin**

Applicable to Licensees Only

Comment Period Open Thru January 19, 1999

Guidelines Establishing Year 2000 Standards for Safety and Soundness

I. APPLICABILITY AND SCOPE

The purpose of this bulletin is to establish minimum operational standards for licensees with respect to Year 2000 Readiness. The safe and sound operation of licensees requires that management take appropriate and timely steps to ensure that record-keeping and other mission critical systems are Year 2000 compliant. Applicants are expected to be in compliance with the bulletin prior to applying for a license.

This bulletin also sets out the range of remedial or enforcement actions and sanctions that may be imposed by the Division of Banks (Division) for licensees that are not in compliance with these guidelines and safety and soundness standards relative to Year 2000 readiness. The provisions of this bulletin are minimum record-keeping or operational standards for licensees. These provisions are independent of, and in addition to, the Division's authority to take any other remedial action under applicable state law.

This bulletin is applicable to all licensees.

II. DEFINITIONS

The following definitions apply to the terms used in this bulletin unless the context otherwise requires:

Business resumption contingency plan means a plan that describes how mission-critical systems of the licensee will continue to operate in the event there are system failures in processing, calculating, comparing, or sequencing date or time data from, into, or between the 20th and 21st centuries; or the years 1999 and 2000; or with regard to leap year calculations.

External system means a system the renovation of which is not controlled by the licensee, including systems provided by service providers and any interfaces with external third party suppliers and other material third parties.

External third party supplier means a service provider or software vendor that supplies services or products to licensees.

Internal system means a system the renovation of which is controlled by the licensee, including software, operating systems, mainframe computers, personal computers, readers/sorters, and proof machines. Internal system also may include a system controlled by the licensee with embedded integrated circuits (e.g., heating and cooling systems, vaults, communications, security systems, and elevators).

Licensee means any person who is licensed by the Commissioner as a collection agency under G.L. c. 93; a small loan agency under G.L. c. 140; a check seller under G.L. c. 167F; a foreign transmittal agency under G.L. c. 169; a check casher under G.L. c. 169A; a motor vehicle sales finance company under G.L. c. 255B; an insurance premium finance agency under G.L. c. 255C; a retail installment sales and service company under G.L. c. 255D; or a mortgage lender or mortgage broker under G.L. c. 255E.

Mission-critical system means an application or system that is vital to the successful continuance of a core business activity. An application or system may be mission-critical if it interfaces with a designated mission-critical system. Software products also may be mission-critical.

Other material third party means a third party, other than an external third party supplier, to whom an licensee transmits data or from whom an licensee receives data, including business partners (e.g., credit bureaus), other licensees, payment system providers, clearinghouses, customers, and utilities.

Remediation contingency plan means a plan that describes how the licensee will mitigate the risks associated with the failure to successfully complete renovation, testing, or implementation of its mission-critical systems.

Renovation means code enhancements, hardware and software upgrades, system replacements, and other associated changes that ensure that the licensee's mission-critical systems and applications are Year 2000 ready.

Year 2000 ready or readiness with respect to a system or application means the system or application accurately processes, calculates, compares, or sequences date or time data from, into, or between the 20th and 21st centuries; or the years 1999 and 2000; or with regard to leap year calculations.

III. YEAR 2000 STANDARDS FOR SAFETY AND SOUNDNESS

A. Review of Mission-Critical Systems For Year 2000 Readiness

Each licensee shall in writing:

1. Identify all internal and external mission-critical systems that are not Year 2000 ready;
2. Establish priorities for accomplishing work and allocating resources to renovating internal mission-critical systems;

3. Identify the resource requirements and individuals assigned to the Year 2000 project on internal mission-critical systems;
4. Establish reasonable deadlines for commencing and completing the renovation of such internal mission-critical systems;
5. Develop and adopt a project plan that addresses the licensee's Year 2000 renovation, testing, contingency planning, and management oversight process; and
6. Develop a due diligence process to monitor and evaluate the efforts of external third party suppliers to achieve Year 2000 readiness.

B. Renovation of Internal Mission-Critical Systems.

Each licensee should have commenced renovation of all internal mission-critical systems that are not Year 2000 ready in sufficient time that testing of the renovation could be substantially completed by December 31, 1998.

C. Renovation of External Mission-Critical Systems

Each licensee shall:

1. Determine the ability of external third party suppliers to renovate external mission-critical systems that are not Year 2000 ready and to complete the renovation in sufficient time to substantially complete testing by March 31, 1999;
2. Maintain written documentation of all its communications with external third party suppliers regarding their ability to renovate timely and effectively external mission-critical systems that are not Year 2000 ready; and
3. Develop in writing an ongoing due diligence process to monitor and evaluate the efforts of external third party suppliers to achieve Year 2000 readiness, including:
 - a. monitoring the efforts of external third party suppliers to achieve Year 2000 readiness on at least a quarterly basis and documenting communications with these suppliers; and
 - b. reviewing the licensee's contractual arrangements with external third party suppliers to determine the parties' rights and obligations to achieve Year 2000 readiness.

D. Testing of Mission-Critical Systems.

Each licensee shall have:

1. Developed and implemented an effective written testing plan for both internal and external systems. Such a plan shall include the testing environment, testing methodology, testing schedules, budget projections, participants to be involved in

testing, and the critical dates to be tested to achieve Year 2000 readiness;

2. Verified the adequacy of the testing process and validated the results of the tests with the assistance of the project manager responsible for Year 2000 readiness, the owner of the system tested, and an objective independent party (such as an auditor, a consultant, or a qualified individual from within or outside of the licensee who is independent of the process under review);
3. Substantially completed testing of internal mission-critical systems by December 31, 1998. Any licensee that did not complete such testing by December 31, 1998 shall notify the Division when such testing will be complete as well as explain why such testing was not complete by the deadline;
4. Commenced testing of external mission-critical systems by January 1, 1999;
5. Substantially completed testing of external mission-critical systems by March 31, 1999;
6. Commenced testing with other material third parties by March 31, 1999; and
7. Completed testing of all mission-critical systems by June 30, 1999.

E. Business Resumption Contingency Planning

Each licensee shall develop and implement an effective written business resumption contingency plan that, at a minimum:

1. Defines scenarios for mission-critical systems failing to achieve Year 2000 readiness;
2. Evaluates options and selects a reasonable contingency strategy for those systems;
3. Provides for the periodic testing of the business resumption contingency plan; and
4. Provides for independent testing of the business resumption contingency plan by an objective independent party, such as an auditor, consultant, or qualified individual from another area of the licensee who was not involved in the formulation of the business resumption contingency plan.

F. Remediation Contingency Planning.

Each licensee that has failed to successfully complete renovation, testing, and implementation of a mission-critical system, or is in the process of remediation and is not on schedule with the key dates in section II.D, shall develop and implement an effective written remediation contingency plan that, at a minimum:

1. Outlines the alternatives available if remediation efforts are not successful, including the availability of alternative external third party suppliers, and selects a reasonable contingency strategy; and

2. Establishes trigger dates for activating the remediation contingency plan, taking into account the time necessary to convert to alternative external third party suppliers or to complete any other selected strategy.

G. Customer Risk

Each licensee shall develop and implement a written due diligence process that:

1. Identifies customers, including fund providers, fund takers, and capital market/asset management counterparties, that represent material risk exposure to the licensee;
2. Evaluates their Year 2000 preparedness;
3. Assesses their existing and potential Year 2000 risk to the licensee; and
4. Implements appropriate risk controls, including controls for underwriting risk, to manage and mitigate their Year 2000 risk to the licensee.

H. Involvement of the Board of Directors and Management.

1. During all stages of the renovation, testing, and contingency planning process, the board of directors and management of each licensee shall:
 - a. be actively involved in managing efforts to plan, allocate resources, and monitor progress towards attaining Year 2000 readiness;
 - b. oversee the efforts of the licensee to achieve Year 2000 readiness and allocate sufficient resources to resolve problems relating to the licensee's Year 2000 readiness; and
 - c. evaluate the Year 2000 risk associated with any strategic business initiatives contemplated by the licensee, including mergers and acquisitions, major systems development, corporate alliances, and system interdependencies.
2. In addition, the board of directors, at a minimum, shall require from management, and management shall provide to the board of directors, written status reports, at least quarterly and as otherwise appropriate to keep the directorate fully informed, of the licensee's efforts in achieving Year 2000 readiness. Such written status reports shall, at a minimum, include:
 - a. The overall progress of the licensee's efforts in achieving Year 2000 readiness;
 - b. The licensee's interim progress in renovating, validating, and contingency planning measured against the licensee's Year 2000 project plan as adopted under section III.A.5;
 - c. The status of efforts by key external third party suppliers and other material

third parties in achieving Year 2000 readiness;

- d. The results of the testing process;
- e. The status of contingency planning efforts; and
- f. The status of the ongoing assessment of customer risk.

IV. SANCTIONS

1. All licensees shall be in compliance with these standards at all times. In addition, all licensees must respond to requests by the Division for information regarding Year 2000 compliance. Failure to review, renovate and test internal and external mission critical systems; or to develop and implement business resumption or remediation contingency plans; or to appropriately identify customer risks; or to respond to requests for information in accordance with this bulletin shall establish that a licensee does not possess the financial responsibility, character, reputation, integrity, and general fitness such as to warrant the belief that the business will operate honestly, fairly, soundly, and efficiently in the public interest.
2. The Division, in its discretion, may impose any or all of the sanctions of section IV(4), under the following circumstances:
 - a. If a report of examination conducted by the Division determines that a licensee is not in compliance with Year 2000 compliance standards by virtue of receiving a "Needs to improve" or "Unsatisfactory" rating during or after the mission critical systems testing stage;
 - b. The licensee fails to take immediate and satisfactory corrective action as directed by the Division; or
 - c. The licensee is not in compliance with the guidelines above; or
 - d. The licensee fails to respond to requests for information relative to Year 2000 compliance.
3. **Corrective action.** Failure to take satisfactory corrective action shall include, but is not limited to, failing to submit an acceptable corrective action plan or submitting a corrective plan that is rejected or deemed unacceptable by the Division.
4. Failure to comply with section IV(1-3) shall constitute grounds for the imposition of the following sanctions, in accordance with applicable licensing statutes and G.L. c. 30A:
 - a. license revocation;
 - b. license suspension;
 - c. license non renewal; or

- d. the issuance of an order to cease and desist.

V. SEVERABILITY

If any provision of this policy statement, or the application thereof to any person or circumstance is for any reason held to be invalid, the remainder of this statement and the application of such provisions to other persons or circumstances shall not be affected thereby.

VI. Sunset

This policy statement of the Division of Banks shall expire on December 31, 2001.

VII. AUTHORITY

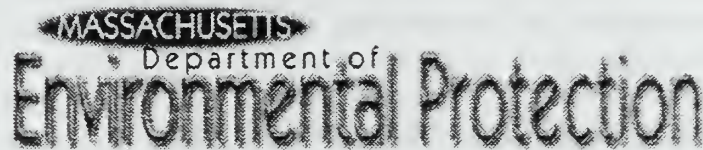
G.L. c. 93, ss. 24-28; G.L. c. 140, ss. 96-114A; G.L. c. 167F, s. 4; G.L. c. 169; G.L. c. 169A; G.L. c. 255B; G.L. c. 255C; G.L. c. 255D; and G L. C. 255E.

[Return to Regulations](#)

[Return to DOB Homepage](#)

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Year 2000 Awareness

The Department of Environmental Protection is responsible for ensuring clean air and water, the safe management and disposal of solid and hazardous wastes, the timely cleanup of hazardous waste sites and spills, and the preservation of wetlands and coastal resources. In carrying out this mission, DEP promotes pollution prevention; permits/certifies facilities and activities; inspects sites and facilities; initiates enforcement actions; implements resource protection strategies; provides emergency response to spills; oversees cleanup of sites; conducts research; and provides municipalities, citizens, and regulated businesses with information and assistance.

The purposes of this notice are to raise awareness of the Year 2000 (Y2k) problem among the regulated community and to encourage it to take immediate action to assess and correct related problems. Regulated entities are responsible to anticipate and eliminate any Year 2000 problems that may impede their compliance with environmental laws and regulations. DEP has issued a Y2K Enforcement Policy Statement to clarify expectations. (below).

YEAR 2000 PROBLEM

In the past 20 to 30 years, many computer systems were designed so that date fields utilize two digits to designate the year. At the turn of the millennium, these systems will incorrectly interpret the year "00" unless they are redesigned to incorporate four-digit fields to designate the century. In addition, some programs and data files may have used the date 9/9/99 as a "dummy" placeholder to indicate program termination, expiration dates or file erasure dates. Also, the year 2000 is a leap year, and some systems will produce wrong day-of-the-week representations after February 29, 2000.

The Year 2000 problem affects all organizations that use computer systems in the course of their business. This includes governments at all levels - local, state and federal - especially because of their dependence on many older systems that have been successfully operating with only minor modifications for 10 to 30 years. The issue is not limited to mainframes, mid-range systems and PCs: PBX systems, Fax machines, VCRs, automated alarms, doors and elevators, laboratory, monitoring, and field equipment may also be affected. The

issue applies to all programming languages and operating systems as well as spreadsheets, personal database applications, ad-hoc queries and report requests.

YEAR 2000 CORRECTION APPROACH

Regulated entities are encouraged to follow a systematic approach to assessing and correcting the Year 2000 problem. A sample of the Commonwealth's Year 2000 strategy which encompasses five phases, is shown below:

- **Awareness:** Effectively communicate with staff to ensure that they understand the Year 2000 problem, participate in all phases of assessment and remediation, and prepare contingency plans.
- **Inventory:** Conduct a comprehensive inventory of the various systems, hardware, firmware, off-the-shelf software, and equipment that contains embedded chips/clocks in the organization.
- **Assessment and Planning:** Decide how to achieve agency compliance by reviewing applications/systems with respect to business needs and long-term agency objectives; determining whether to retire, replace, redevelop, or remediate each application, system, or piece of equipment; establishing priorities; and preparing test plans.
- **Conversion/Replacement:** Implement solutions by purchasing, upgrading, or repairing systems, products or equipment; preparing final test plans and a test environment; and reevaluating the assessment plan.
- **Validation and Deployment:** Carry out tests; document results in detailed reports; re-deploy systems and/or equipment; train end users in use of features modified because of Y2K changes.

ADDITIONAL INFORMATION

Numerous Internet web sites are available to provide you with additional information. A sampling follows:

- Massachusetts Information Technology Division's Year 2000 website at <http://www.state.ma.us/y2k/> provides two documents that explain how to get started in meeting the Y2K challenge, (Meeting the Challenge, I and II) and a sample Y2K project plan that can be downloaded and customized to track your Y2K project. In addition, a white paper concerning Y2K issues for cities, towns, and other local governmental entities has been posted.
- U.S. Environmental Protection Agency's website at <http://www.epa.gov/year2000/> includes a Year 2000 guidance document that provides assistance in preparing Y2K strategy

documents and describes EPA's efforts.

- Public Technology Inc. maintains a Year 2000 website at <http://www.pti.nw.dc.us/membership/y2k/>. This site was prepared in conjunction with the National League of Cities, the National Association of Counties, and the International City/County Management Association to build awareness about the Y2K problem, identify solutions and resources to solve the problem, and promote contingency planning for those that may not be ready by December 31, 1999.

This message was prepared for informational purposes only. Information provided does not represent government, business, legal, or other advice related to the Year 2000 problem.

YEAR 2000 ENFORCEMENT POLICY STATEMENT

The Massachusetts Department of Environmental Protection ("DEP") is responsible for ensuring compliance with environmental laws and regulations.

Regulated entities are responsible for taking whatever steps are necessary to ensure continued full compliance with environmental laws and regulations. This responsibility involves identifying and remediating any Year 2000 ("Y2K") problems that threaten full compliance, and includes a full Y2K issues assessment of possible vulnerabilities of data systems, monitoring and operating systems and embedded computer chips that are relied upon for business operation or as part of the data gathering and reporting process.

The Y2K problem is receiving substantial attention in the media. In addition, DEP, along with the U.S. Environmental Protection Agency and numerous local authorities and professional organizations, is engaged in a public outreach effort to raise the awareness of regulated entities about the Y2K problem, and to encourage them to take immediate action to assess and correct related problems.

Accordingly, DEP will not accept Y2K excuses as constituting force majeure or other defense against enforcement for noncompliance. This applies both to Y2K problems arising from a regulated entity's own equipment and facilities as well as to problems stemming from a vendor's facility or equipment. Although failure to be Y2K compliant is not itself a violation, DEP will consider failure to comply with environmental requirements because of Y2K problems to be violations, and may enforce against those violations.

Contact: Victoria.Phillips@state.ma.us
[[MA DEP Home](#)] [[Search](#)]

Updated: January 5, 1999



January 19, 1999

Mr. Val Asbedian
Director, Strategic Planning Group
Commonwealth of Massachusetts
Information Technology Division
One Ashburton Place
Room 801
Boston, MA 02108

Dear Val:

On behalf of the MIIA staff, thank you very much for coordinating the Y2K workshop at the MMA annual meeting last Friday.

The information you **presented** was both abundant and accessible and the participants went away enriched with **information** and direction.

We were pleased with **the large turnout** for the workshop and feel grateful for the high level of expertise you and **your fellow panelists** embody. Your suggestion that David and Jerry round out the panel was **an excellent one**. You make a very effective team!

On a personal note, I **truly** appreciate your supportive and relaxed manner during our preparations. You are a **pleasure** to work with!

If you would like **additional copies** of the Y2K Survival kit, please let me know. I do plan to send a copy to **Governor Cellucci's** office as you suggested.

I hope to have the **opportunity** to work with you again in the months before and after January 1, 2000!

Sincerely,

Betsy Caruso
Membership Services Coordinator
MIIA

November 13, 1998

Mr. Val Asbedian
Director of Strategic Planning
Commonwealth of Massachusetts
Information Technology Division
1 Ashburton Place
Boston, MA 02108

Dear Val,

On behalf of the North Central Massachusetts Chamber of Commerce, I want to thank you for taking the time out of your busy schedule to address our audience at our October breakfast program. Your discussion on Y2K was both interesting and informative. All comments from the attendees were very positive and, as you could tell by the attendance and questions, was a topic everyone was looking forward to. My only regret is that we did not have more time.

If I may ever be of any assistance to you, please do not hesitate to contact me.

Sincerely,

Nancy

Nancy A. Maynard
Program Manager



THE COMMONWEALTH OF MASSACHUSETTS

PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION
5 MIDDLESEX AVENUE, 3RD FLOOR
SOMERVILLE, MA 02145
(617) 666-4446

FAX: (617) 628-4002 TTY: (617) 591-8917
www.state.ma.us/PERAC

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October 22, 1998

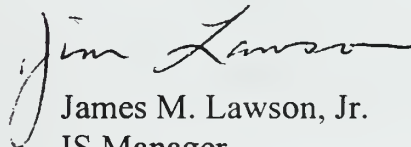
Val Asbedian
ITD, Dir. of Strategic Planning
One Ashburton Place, Room 801
Boston, MA 02108
Dear Val:

On behalf of PERAC and MACRS I would like express our appreciation for your "Year 2000" presentation at the recent MACRS Conference. The material was informative and enlightening and will help to give this topic the awareness that is needed.

It really is great to be able to call on the expertise and resources available at the Information Technology Division.

Thanks again for your cooperation

Sincerely,


James M. Lawson, Jr.
IS Manager

cc: Luis Gutierrez, CIO - ITD
Robert Stalnaker, Exec. Dir. - PERAC
Ann O'Brien, Assist. Exec. Dir. - PERAC



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DAN SULLIVAN
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MICHAEL TOBIA
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GINNY WILLIAMS
Pillsbury Co.
• **ST WYATT**
Went Foods, Inc.
JOCK YOUNG
West Foods
DONALD ZALATAN
Price Chopper
• **Ex-Officio**

October 15, 1998

Mr. Val Asbedian
Director, Strategic Planning Group
One Ashburton Place, Room 801
Boston, MA 02108

Dear Mr. Asbedian,

I would like to thank you for taking the time out of your busy schedule to attend our October 1st Board of Directors meeting as our guest speaker.

From the comments we received, those in attendance found your presentation on Y2K compliance both informative and interesting. The information you supplied and discussed is most appreciated.

Please do not hesitate to contact my office if you wish to share any further information or if we can be of any assistance.

Sincerely,

Christopher P. Flynn

*A.S. - I heard you on BZ
Herdie after our meeting - you
sounded great!*



MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

Telephone: (617) 242-6000
Facsimile: (617) 241-6070

October 8, 1998

Mr. Val Asbedian
Director of Strategic Planning
Commonwealth of Massachusetts
Information Technology Division
One Ashburton Place
Boston, MA

Dear Val,

Thank you for your participation in the Massachusetts Water Resources Authority's (MWRA's) Year 2000 Program Community Forum (MassWater 2000). Your participation and presentation was very helpful in providing the communities with the necessary background and information that is necessary to address the Year 2000 problem. The response from those in attendance was very positive. Participants are looking forward to the next session.

The MWRA and MWRA Advisory Board will continue to conduct quarterly forums with its member communities in an effort to continue to share information regarding our Year 2000 plans, to foster the exchange of information, and if necessary coordinate efforts amongst agencies such as yours. We look forward to your participation as we continue our community outreach.

Sincerely,

A handwritten signature in cursive script that reads "Robert B. Regan".

Robert B. Regan, Y2K Program Manager

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Notes

Lined area for notes.

Y2K PMO Interview Results for Oct. - Dec. 1998

By

Commonwealth of Massachusetts
Year 2000 Program Management Office
February 3, 1999

1 Background

In June 1997, ITD's Strategic Planning Group (SPG) established the Year 2000 Program Management Office (Y2K PMO) to coordinate the Commonwealth's Year 2000 effort. The purpose of the Y2K PMO is to:

- Ensure accurate monitoring of the Commonwealth's progress in meeting the Year 2000 challenge;
- Identify risk areas and risk mitigation activities;
- Disseminate lessons learned to state agencies; and,
- Serve as a Year 2000 resource to state agencies and departments in the three government branches.

Executive Order #408, issued on December 14, 1998, requires that the head of each state agency shall appoint a senior official to oversee and coordinate the Year 2000 compliance and contingency planning activities of each agency under their supervision.

The PMO uses an interview process to monitor the status of the Year 2000 projects being performed by the agencies in the Commonwealth. This interview process includes a determination of the approach being used by an agency to identify its exposure to the Year 2000 problem and to achieve Year 2000 compliance. The PMO monitors agencies on a quarterly cycle.

In addition, agencies are asked to identify their **mission critical** and **essential** systems and to provide information on the strategy for and progress in making these systems compliant.

Mission critical systems are those:

- Which directly impact the health, safety, or livelihood of Commonwealth citizens,
- Which directly impact revenue to the state, or
- Whose loss would severely jeopardize agency delivery of services.

Essential systems are those whose loss would cause a disruption of some agency services but the agency could still deliver primary services.

Most agencies also have a third category of systems, "other required", which affect workflow in the agency but whose loss would not significantly impair delivery of services. Agencies are expected to include all systems in their Year 2000 projects, but the PMO is only monitoring the status of mission critical and essential systems.

This report compiles information obtained during the Oct. – Dec. 1998 quarter to provide updated information on all agencies regarding achieving compliance in accordance with the Commonwealth target dates for redeployment:

- January 31, 1999 for mission critical systems and
- May 31, 1999 for essential systems.

The following definitions of Agency and System Schedule Status are applied in the PMO reports:

Agency Schedule Status	System Schedule Status	Definition
Green	Low	Has met or is expected to meet Commonwealth Target Dates
Red	High	Scheduled to miss at least one Commonwealth target date
Yellow	Medium	Latest reported schedule meets the Commonwealth Target Date, but significant factors which could result in schedule slippage also reported

To date, no agency has reported that they will be unable to deliver uninterrupted essential services. It should be noted that remediation projects for 14 (5%) of the Commonwealth's 297 Mission Critical Systems are currently scheduled for completion after June 30, 1999, and another 13 (4%) currently have no committed Scheduled Deployment Date.

2 Summary of Agency Status for the Quarter

2.1 Interviews

The Y2K PMO is currently monitoring Year 2000 compliance efforts for 170 agencies in the Commonwealth. The changes reflect one agency added by the PMO to Transportation and Construction, one agency added within General Court, one agency dropped from Public Safety, and one reclassified from Economic Development to an Independent Agency. The agencies are classified as shown in Table 1.

Table 1. Agencies Interviewed for Oct. – Dec. 1998

Agency Type	# of Agencies Oct. – Dec. 98	# of Agencies Jul. – Sep. 98
A&F	20	20
Constitutional Offices	6	6
Consumer Affairs	10	10
Economic Development	5	6
Education	1	1
Elder Affairs	1	1
Environmental Affairs	7	7
Executive Offices	3	3
General Court	4	3
Health and Human Services	16	16
Higher Education	32	32
Housing	2	2
Independent Agencies	24	23
Judiciary	5	5
Labor Development	9	9
Public Safety	21	22
Transportation & Construction	4	3
Total	170	169

For the current quarter, the Y2K PMO interviewed all agencies in this list. Interviewers conducted interviews by phone or in person. Evaluation criteria used for the current quarter were similar to those used for the Jul. – Sep. 98 quarter.

* Absence of a committed scheduled deployment date typically was reported as being due to uncertainties about funding, staffing or dependence on an external partner for support or cooperation in remediation or testing.

Agency Status

Summary statistics for the agency Year 2000 projects are shown in Table 2.

Table 2. Agency Y2K Project Status Summary for Oct. – Dec. 1998

Summary	# of Agencies Oct. – Dec. 98	# of Agencies Jul. – Sep. 98
Status		
Green	107	123
Yellow	21	14
Red	42	31
Agencies to be interviewed	–	1
Total Number of Agencies Being Tracked	170	169

The data indicates a number of changes in status of Year 2000 compliance efforts for the agencies from the status reported in Jul. – Sep. 98. The changes are summarized in Table 3.

Table 3. Change in Agency and Systems Y2K Project Status from Previous Quarter

Change	# Agencies	# Systems
Improved	8	43
No Change	133	199
Slipped	29	33
No 3Q98 Data	--	241
Total	170	516

Note: 241 systems either belonged to "Green" status agencies which were not reviewed in the Jul. – Sep. 98 period, or were newly-reported systems.

The table indicates that while 8 agencies' schedules improved in the quarter, 29 agencies' schedules slipped. However, 15 of the 29 went from Green to Yellow status, indicating that their current schedule still indicates completion on time, but that there are circumstances which may result in some of these agencies' failing to make schedule, while the remainder will likely still complete on time. Such slippage is to be expected due to the technical nature and complexity of Year 2000 projects.

2.2 System Status

The 170 agencies that the PMO is tracking have reported 297 mission critical systems and 219 essential systems. Table 4 gives the PMO's assessment of the schedule status for these systems and indicates that between 57% and 69% of Mission Critical Systems were likely to meet the Commonwealth target compliance schedule of January 31, 1999 at the time of interviewing. Between 85% and 90% of Essential Systems were likely to meet the Commonwealth target compliance schedule of May 31, 1999 at the time of interviewing. The difference in both cases is represented by the percentage of systems with a Yellow Status. If some of these systems are deployed as scheduled, the percentage rises towards the maximum.

Table 4. Summary of Schedule Status for Systems

Schedule Status	Mission Critical Systems		Essential Systems	
	Oct. – Dec. 1998	Jul. – Sep. 1998	Oct. – Dec. 1998	Jul. – Sep. 1998
High	92	67	22	22
Medium	37	11	10	9
Low	168	87	187	86
Assumed Low*	--	91	--	73
Insufficient Data**	--	10	--	1
Total	297	266	219	191
Low (likely)	57%		85%	
Medium (possible)	12%		5%	
Maximum On Time	69%		90%	

* Agency was not interviewed in prior quarter. Low status was assumed from status determined for previous quarter.

** Required agency interview or additional information.

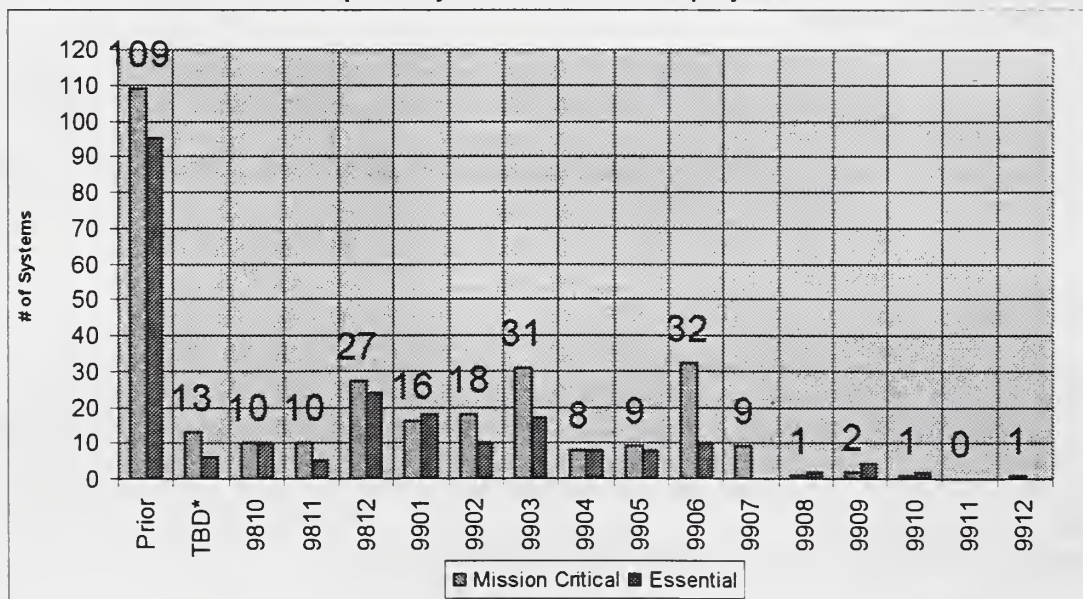
2.3 Increase in Number of Mission Critical and Essential Systems Tracked

The information in Table 4 indicates that the number of mission critical and essential systems being reported to the PMO has increased. This increase was anticipated in the Jul. - Sep. 98 report due to the identification of Mission-Critical applications which surfaced during desktop compliance and non-IT ("embedded") systems assessment efforts. In addition, several agencies reorganized their remediation projects, or reported additional systems as a result of responding to the Survey from the Office of the State Auditor and/or the Agency Statement of Compliance Status issued by the PMO.

2.4 System Scheduled Deployment Dates

Scheduled deployment dates of systems are shown in Graph 1. Systems with no currently committed scheduled deployment date were listed as TBD.

Graph 1. System Scheduled Deployment Dates



* TBD: Absence of a committed scheduled deployment date typically was reported as being due to uncertainties about funding, staffing or dependence on an external partner for support or cooperation in remediation or testing.

2.5 System Future Date Testing Plans

Testing in an environment to simulate operation during the Year 2000 ("Future Date Testing") is recommended of all systems. It should be noted that some environments (on IBM mainframes, for example) have not been available for such testing. In accordance with the Year 2000 Compliance and Validation Standards of July 31, 1998, Future Date Testing must be implemented for every agency's mission critical systems in order to address the possibility that errors may have been overlooked or introduced during remediation and ordinary maintenance testing.

2.6 Commonwealth-Critical Agencies

Chapter 289, Section 360 of the Acts of 1998 directs the Information Technology Division and the Chief Information Officer of the Commonwealth to coordinate and oversee the Year 2000 compliance efforts of the executive departments. The CIO of the Commonwealth, in conjunction with the Secretary of Administration & Finance, will identify those agencies whose uninterrupted service delivery is considered of extreme importance to the health, safety and livelihood of the citizens of the Commonwealth of Massachusetts, or to agencies who provide such services. These agencies will be designated as Commonwealth-Critical Agencies.

All Commonwealth-Critical Agencies must perform Independent Verification and Validation work for Mission Critical systems, as stipulated in the Year 2000 Compliance and Validation Standards published in August, 1998. IV&V allows for an independent verification of the remediated code and testing procedures, thus reducing the likelihood of a system failure. Several Federal agencies have already mandated that their state counterparts undertake IV&V in order to reduce the possibility of large-scale processing problems.

Contingency Plans are recommended for all Mission Critical systems, but are required (per the Executive Order #408) for all Executive Branch agency systems whose scheduled deployment date is after June 30, 1999, and for all Mission Critical systems belonging to Commonwealth-Critical Agencies.

It is the responsibility of Commonwealth-Critical Agencies to complete Business Continuity Planning for those vital service operations which might be affected by a software application disruption or any other cause, such as failure of external interfaces, business partners, etc.

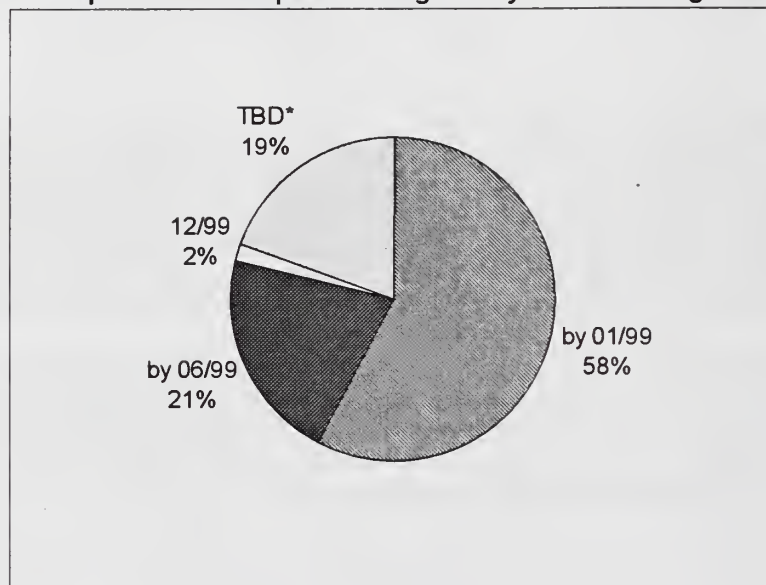
2.7 Emergency Preparedness

The PMO has met with and continues to work with FEMA and MEMA, the Massachusetts Emergency Management Agency, to draw up emergency preparedness plans for use in the event that unforeseen problems occur which might otherwise threaten to disrupt the normal delivery of emergency services, traffic control, etc. FEMA coordinates regional planning and coordination, while MEMA coordinates planning and coordination for the Commonwealth of Massachusetts.

2.8 LAN Compliance

The Executive Branch was directed by the CIO of the Commonwealth to achieve compliance for all LAN's by December 31, 1998. While this has spurred activity in those agencies, others are delaying plans until June of 1999. Graph 2 shows the percent of agencies reaching LAN Compliance by period.

Graph 2. LAN Compliance Progress by Period Ending Date

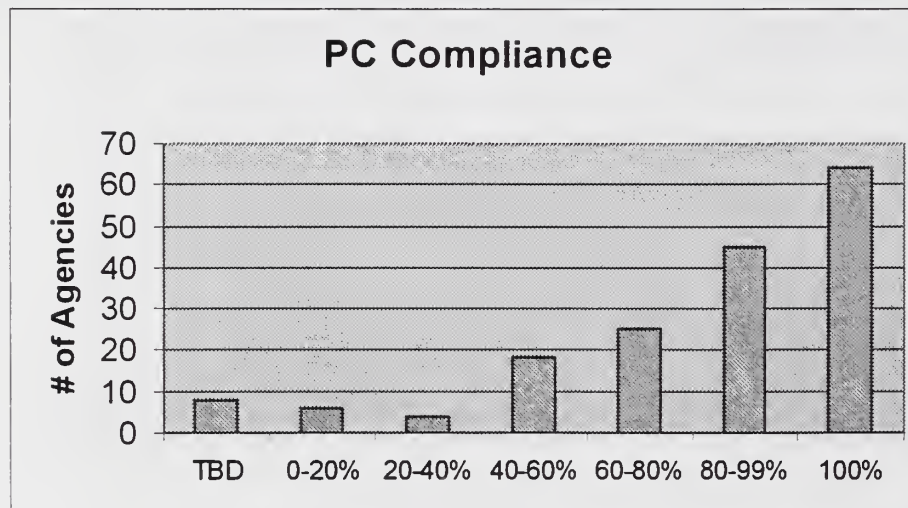


2.9 PC Compliance

The progress for Desktop PC's and software compliance is shown in Graph 3. Since a statewide contract has been established with Platinum Software, a tool suite for remediating desktop software assets is now readily available at advantageous pricing.

In addition, the PMO has provided workshops for agencies to assist in understanding how PC hardware and software can be tested and remediated. This material is also made available on the PMO website.

Graph 3. Percentage of PC's Compliant Today



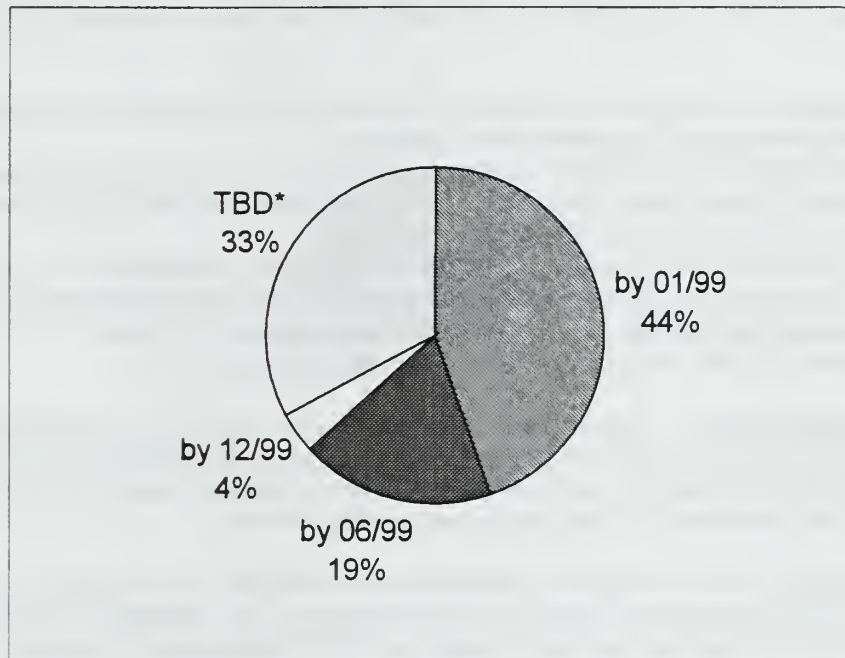
* TBD: Absence of a committed scheduled deployment date typically was reported as being due to uncertainties about funding, staffing or dependence on an external partner for support or cooperation in remediation or testing.

2.10 Telephone System Compliance

Agencies' success in achieving compliance with telephone systems has been occurring at a slow pace. This is partially attributed to the complexity of some systems, the lack of agency understanding on how to approach the equipment and vendors, and lack of available vendor information regarding their systems' Y2K compliance.

To help speed the process of telephone system compliance, the PMO has been working closely with the ITD CSB organization to develop solutions to the problem. CSB has contacted telephone system equipment and service providers in order to assemble information and tools to be used by Agencies in achieving Y2K compliance. The tools include a process methodology, a vendor contact listing, a presentation of information at the Y2K User Group meeting and posting of information on the Commonwealth's Y2K Web page.

Graph 4. Telephone Compliance Progress by Period



3 General Comments

- A. Agency Schedule Slippage. The information in Table 3 indicates that agency projects are becoming more stable. However, schedule slippage from quarter to quarter should now become the focus of additional management attention to ensure that any persistent project issues are resolved. The status of these agencies will become more difficult to correct as the remaining time diminishes; it is imperative that steps be taken soon to correct the situation.
- B. Systems Schedule Status. As shown in Table 4, the number of Red mission critical systems (92) has risen (from 67) and is too high. While there frequently are external factors which can cause an information technology project schedule to slip, the PMO will monitor these systems' project progress to ensure that any schedule slippage from current completion dates is addressed, and that contingency plans are developed as required.
- C. Awareness. Awareness has increased significantly in the past quarter. This is probably due to the number of external agencies requesting Y2K information, in particular:
- Executive Order #408, requiring that the secretary of each office, and the director of each department appoint a senior official to oversee and coordinate the compliance and contingency planning activities of each agency within his or her secretariat or department.
 - Recent CIO requirement that agencies submit their initial "Agency Statement of Year 2000 Compliance Status" (due September 14, 1998) which requires signatures of executive management.
 - Year 2000 survey from the Office of the State Auditor due September 17, 1998.
 - CIO requirements for IV&V and contingency planning for Y2K projects.
- D. Funding and Legislative Support. The inclusion of the Y2K supplemental funding of \$20.4M approved August 10, 1998 has relieved a great deal of potential slippage previously reported for Y2K projects. However, this funding is currently fully designated and no longer includes a reserve for unexpected projects. An additional funding request will be submitted to the Legislature shortly.
- E. Contingency Planning. Since most agencies are still heavily involved in remediating their systems, only a very few agencies have started development of contingency plans. As remediation efforts end, or project schedules slip enough to mandate contingency planning, the PMO anticipates the number of systems with Contingency Plans will increase during the next quarter.
- F. Embedded Systems. This remains an area of concern, but agencies having significant exposure in this area have demonstrated good progress this quarter. Reported experience of agencies currently tracks with the embedded systems industry, and indicates that only a small % of embedded systems components have a date-related problem which needs to be analyzed to determine if they have an adverse impact. While there are lead times associated with contracting external vendors to service these items, and a significant pace of remediation must be established and maintained, the percentage of affected assets is not as high as was originally estimated.
- G. Review Process. In the Oct. – Dec. 1998 period, 107 agencies were rated "Green" for application software remediation. While we will continue to track these agencies, the PMO is going to undertake a focused review of the Red status Mission Critical systems in a monthly basis through the remainder of the program.

4 Agency Status by Secretariat for Oct. - Dec. 1998



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Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
A&F	Admin. Ag. for Dev. Disabilities	Green	Green	No Change			Jan-99	100%	Jul-98		N/A	
A&F	Admin. Law Appeal	Green	Green	No Change				100%			N/A	
A&F	Appellate Tax Board	Green	Green	No Change	1			100%	Oct-98		Yes	
A&F	Bureau of State Office Bldg.	Red	Red	No Change	2	2	Dec-98	100%	Oct-98	May-98	Yes	
A&F	Capital Planning & Operations	Yellow	Green	Slipped	1		Oct-98	80-99%	Jun-99	Jun-99	Yes	
A&F	Central Business Office	Yellow	Green	Slipped	1		Jan-99	40-60%			No	
A&F	Civil Service Comm.	Green	Green	No Change			Dec-98	80-99%	Sep-98	Dec-98	No	
A&F	Comm. Against Discrimination	Green	Green	No Change	1			60-80%			No	
A&F	Dept. of Revenue	Red	Red	No Change	5	6	Apr-99	60-80%	Jun-99	Dec-98	Yes	
A&F	Dept. of Veterans Services	Green	Green	No Change	1		Jan-99	100%			No	
A&F	Div. of Human Resources	Yellow	Yellow	No Change	1	3	Jan-98	100%	Nov-98	Oct-98	In Progress	Jan-99
A&F	EO of Admin & Finance	Green	Green	No Change			Dec-98	100%			No	
A&F	Fiscal Affairs Division (formerly Budget Bureau)	Green	Green	No Change	2	2	Dec-98	100%			No	
A&F	Group Insurance Commission	Green	Green	No Change	1		Sep-98	100%	Oct-98		Yes	
A&F	Information Technology Division	Yellow	Yellow	No Change	9	10		80-99%			Yes	
A&F	Mass. Office on Disability	Red	Yellow	Slipped	2		Jan-99	80-99%			Yes	

Y2K Agency Status by Secretariat for Oct. - Dec. 1998

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
A&F	Office of Dispute Resolution	Green	Green	No Change				40-60%			N/A	
A&F	Operational Services Division	Green	Green	No Change	2	3	Jan-99	80-99%			Yes	
A&F	Public Emp's Retirement Board	Green	Green	No Change	3	1	Dec-98	80-99%	Jun-98		Yes	
A&F	Teacher's Retirement Board	Green	Green	No Change		1	Jan-99	0-20%		Jan-99	Yes	Jan-99
Const. Off.	Attorney General	Green	Green	No Change		4		60-80%		Oct-98	Yes	
Const. Off.	Auditor's Office	Yellow	Green	Slipped		2		100%	Aug-98		Yes	
Const. Off.	Inspector General	Green	Green	No Change			Jun-99	100%			N/A	
Const. Off.	Secretary of State-Other	Yellow	Red	Improved	4	6	Oct-98	60-80%	Mar-99	Apr-98	Yes	Oct-98
Const. Off.	Secretary of State-Voter Reg	Red	Red	No Change	1			0-20%		May-98	N/A	
Const. Off.	Treasurer & Receiver General	Green	Red	Improved	7	1		40-60%	Sep-98	Jul-98	Yes	
Consumer	Alcol. Bev. Control Comm.	Green	Green	No Change		1	Nov-98	100%	Jun-98	Apr-99	In Progress	
Consumer	Board of Reg. in Medicine	Green	Green	No Change	1		Dec-98	80-99%	Jun-98	Sep-98	In Progress	Sep-98
Consumer	Dept of Telecommunications & Energy	Green	Green	No Change	2	2	Dec-98	100%	Jan-99	Apr-99	In Progress	Nov-98
Consumer	Div. of Banks	Green	Green	No Change	1	2	Jun-98	100%	Jun-98	Jan-99	In Progress	Jun-98
Consumer	Div. of Energy Resources	Green	Yellow	Improved			Dec-98	40-60%	Mar-99	Mar-99	No	Sep-98
Consumer	Div. of Insurance	Red	Red	No Change	1	2	Jun-98	100%	Oct-98	Jan-98	In Progress	

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
Consumer	Div. of Registration	Green	Green	No Change	1	4	Dec-98	80-99%	Mar-99	Jun-98	In Progress	Dec-98
Consumer	Div. of Standards	Green	Green	No Change	1			100%	Sep-98	Jun-98	In Progress	
Consumer	Off of Cons. Aff & Business Reg's	Green	Green	No Change		1	Feb-99	100%	Sep-98	Jun-98	In Progress	Sep-98
Consumer	State Racing Commission	Green	Green	No Change		2	Jun-98	100%	Jun-98	May-98	Yes	Sep-98
Econ. Dev.	Dept. of Economic Development	Green	Green	No Change			Nov-98	80-99%	Nov-98	Jun-98	Yes	Oct-98
Econ. Dev.	Office of Film	Green	Green	No Change			Dec-98	100%	Aug-98	Aug-98	N/A	
Econ. Dev.	Office of International Trade	Green	Green	No Change		1	Oct-98	100%	Dec-98		N/A	
Econ. Dev.	Office of Travel & Tourism	Green	Green	No Change		1		80-99%	Aug-98		No	
Econ. Dev.	SOMWBA	Green	Green	No Change		1	Aug-98	100%			Yes	
Education	Dept. of Education	Green	Green	No Change		1	Mar-99	100%	Jul-99		No	
Elder Aff.	EO Elder Affairs	Green	Green	No Change	1	3	Nov-98	80-99%	Dec-97	Jun-98	Yes	
Environ.	Dept. of Environ. Management	Yellow	Red	Improved	4	5	Jun-99	40-60%	Feb-99	Jan-00	Yes	Mar-99
Environ.	Dept. of Environmental Protection	Red	Red	No Change	4	5	Jun-99	80-99%	Dec-98	Feb-99	In Progress	Dec-98
Environ.	Dept. of Food & Agriculture	Yellow	Red	Improved	1	3		80-99%		Jun-98	In Progress	
Environ.	Div. of Fisheries, Wildlife, & Environ'l Law En	Red	Red	No Change	3		Jan-99	100%	Feb-99	Jun-99	In Progress	
Environ.	EO of Environ Affairs	Red	Red	No Change	1	1	Aug-98	100%	Mar-99	Mar-99	Yes	

Y2K Agency Status by Secretariat for Oct. - Dec. 1998

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
Environ.	Low Level Radio. Waste Mgmt Brd	Green	Green	No Change				40-60%	Sep-98	Feb-99	N/A	
Environ.	Metropolitan District Commission	Yellow	Yellow	No Change	1	1	Aug-98	80-99%	Dec-98	Aug-98	No	Jun-99
Exec Office	Governor's Council	Green	Green	No Change			Dec-98	100%			In Progress	
Exec Office	Governor's Office	Green	Green	No Change	4			100%			Yes	
Exec Office	Lt. Governor's Office	Green	Green	No Change			Dec-98				N/A	
Gen. Court	House of Representatives	Green	Green	No Change			Feb-99	0-20%			Yes	
Gen. Court	House Ways and Means	Green	Green	New			May-99	100%			Yes	
Gen. Court	Legislature DP	Green	Green	No Change	1			20-40%			No	
Gen. Court	Senate Computer Division	Green	Green	No Change		1	Jan-99	100%			No	
HHS	Comm. for the Blind	Green	Green	No Change		2	Dec-98	60-80%	Nov-98		Yes	
HHS	Comm. for the Deaf & Hard of Hearing	Green	Green	No Change			Oct-98	40-60%			In Progress	
HHS	Dept. of Mental Health	Yellow	Green	Slipped	1		Dec-98	60-80%	Aug-99		No	
HHS	Dept. of Mental Retardation	Red	Green	Slipped	1		Dec-98	60-80%			Yes	
HHS	Dept. of Public Health	Red	Red	No Change	18	10	Dec-98				No	
HHS	Dept. of Social Services	Green	Green	No Change	1	1	Dec-98	80-99%	Nov-98		Yes	
HHS	Dept. of Trans. Assistance	Red	Red	No Change	11	2	Jan-99	60-80%	Jan-99		Yes	

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
HHS	Dept. of Youth Services	Red	Red	No Change	1		Jan-99	60-80%			No	
HHS	Div. of Health Care Finance	Red	Red	No Change	2	6	Feb-99	100%	Jul-98	Aug-98	N/A	
HHS	Div. of Medical Assist.	Red	Red	No Change	3		Dec-98	100%	Jun-99	Jun-99	Yes	
HHS	EO of HHS	Green	Green	No Change			Dec-98	100%	Nov-98	Jan-99	N/A	
HHS	Mass. Rehabilitation Comm.	Green	Green	No Change	1		Nov-98	100%	Nov-98		No	
HHS	Office for Refugees & Immigrants	Green	Green	No Change		1	Nov-98	80-99%	Jan-99		Yes	
HHS	Office of Child Care Services	Green	Green	No Change	3	1	Feb-99	80-99%	Feb-99	May-98	Yes	
HHS	Soldiers Home-Chelsea	Green	Green	No Change	2		Dec-98	100%			Yes	
HHS	Soldiers Home-Holyoke	Red	Red	No Change	3		Dec-98	100%			Yes	
Higher Ed	Berkshire Community College	Green	Green	No Change	1		Aug-98	60-80%	Jun-99	Feb-99	No	
Higher Ed	Board of Higher Education	Green	Green	No Change			Dec-98	40-60%	Aug-98		No	
Higher Ed	Bridgewater State College	Green	Green	No Change	3	1	Jun-99	80-99%	Jun-99	Jun-98	Yes	
Higher Ed	Bristol Comm. College	Green	Green	No Change	2		Jan-99	40-60%	Sep-98	Aug-98	N/A	
Higher Ed	Bunker Hill Comm. College	Green	Yellow	Improved	2	2	Aug-98	60-80%	Jun-99	Jun-99	No	
Higher Ed	Cape Cod Community College	Green	Green	No Change	3		Jun-99	80-99%	Jul-98	Oct-99	No	
Higher Ed	Fitchburg State College	Green	Green	No Change	2		Jun-98	80-99%	Aug-97		N/A	

Y2K Agency Status by Secretariat for Oct. - Dec. 1998

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
Higher Ed	Framingham State College	Green	Green	No Change	3	2	Aug-98	100%	Dec-94	Jun-99	No	
Higher Ed	Greenfield Comm. College	Yellow	Green	Slipped	4	1	Feb-99	80-99%	Jan-99		No	
Higher Ed	Holyoke Comm. College	Green	Green	No Change	4		Jun-98	0-20%	Aug-98	Sep-98	No	Jan-99
Higher Ed	Mass. Bay Comm. College	Red	Green	Slipped	4		Aug-98	80-99%			No	
Higher Ed	Mass. College of Art	Green	Green	No Change	1	4	Jun-98	100%	Jun-98	Jun-98	Yes	
Higher Ed	Mass. College of Liberal Arts (North Adams)	Yellow	Green	Slipped	2			60-80%	Sep-98	Jun-99	Yes	
Higher Ed	Mass. Maritime Academy	Green	Green	No Change	2		Jul-98	80-99%	Aug-99	Jan-99	N/A	
Higher Ed	Massasoit Comm. College	Green	Green	No Change	2		Oct-98	80-99%	Mar-99	Jul-99	In Progress	
Higher Ed	Middlesex Comm. College	Yellow	Green	Slipped	3	1		80-99%	Sep-99	Sep-99	N/A	
Higher Ed	Mt. Wachusett Comm. Coll.	Green	Green	No Change	1	3	Jan-99	100%	Jan-99	Mar-99	No	
Higher Ed	North Shore Comm. College	Green	Green	No Change	2	1	Jun-99	40-60%	Mar-99	Feb-99	No	
Higher Ed	Northern Essex Comm. College	Green	Green	No Change	1	1	Feb-99	60-80%	Jun-99	Jan-99	N/A	
Higher Ed	Quinsigamond Comm. College	Green	Green	No Change	2	1	Dec-98	100%	Jan-99	Jun-98	No	Jun-99
Higher Ed	Roxbury Comm. College	Red	Yellow	Slipped	2		Jun-98	100%			No	
Higher Ed	Salem State College	Yellow	Green	Slipped	2	2	Mar-99	40-60%	May-98	Feb-99	No	
Higher Ed	Springfield Tech. Comm. Coll.	Green	Green	No Change		2	Feb-99	40-60%	Dec-98		No	

Y2K Agency Status by Secretariat for Oct. - Dec. 1998

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
Higher Ed	UMass - Amherst	Green	Green	No Change			Dec-98	80-99%	Jan-99		No	
Higher Ed	UMass - Boston	Green	Green	No Change			Mar-98		Jan-99	Mar-99	No	
Higher Ed	UMass - Boston, Donahue Inst.	Green	Green	No Change			Jun-98	80-99%			No	
Higher Ed	UMass - Dartmouth	Green	Green	No Change	2	1	Aug-98	40-60%	Oct-98	Jun-99	No	
Higher Ed	UMass - Lowell	Green	Green	No Change	2		Jun-99	80-99%	Jan-99	Jul-99	No	
Higher Ed	UMass - Presidents Office	Red	TBD	Slipped	4	1	Dec-98	60-80%	Jun-99		No	
Higher Ed	UMass - Worcester (Medical School)	Red	Yellow	Slipped	1	1	Jul-99	40-60%	Dec-98	May-99	In Progress	
Higher Ed	Westfield State College	Red	Green	Slipped	2	1	Mar-99	40-60%	Jan-99	Jan-99	No	
Higher Ed	Worcester State College	Green	Green	No Change	1		Dec-98	80-99%	Jun-99	Jun-99	N/A	
Housing	Dept. of Housing & Com Dev	Green	Green	No Change		3	Jul-98	100%	Oct-98	Sep-98	Yes	Dec-98
Housing	Mass. Housing Finance Agency	Red	Green	Slipped	10	6	Nov-98	80-99%	Jun-99		Yes	
Ind. Agency	Board of Library Commission	Green	Green	No Change		1	Dec-98	80-99%			N/A	
Ind. Agency	Campaign & Political Finance	Red	Green	Slipped	1			100%			N/A	
Ind. Agency	Central Artery/Tunnel	Red	Red	No Change	3	1		80-99%			Yes	
Ind. Agency	Committee for Public Counsel	Green	Green	No Change	1		Feb-99	80-99%	Aug-98	Dec-98	In Progress	
Ind. Agency	Community Dev. Finance Corp.	Yellow	Green	Slipped	1	2	Apr-98	100%			In Progress	

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Y2K Agency Status by Secretariat for Oct. - Dec. 1998

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
Ind. Agency	DA Association	Green	Green	No Change		1	Dec-98	0-20%	Jan-98	Dec-98	No	
Ind. Agency	Disabled Persons Protection	Green	Green	No Change		1	Nov-98	100%	Mar-99	Feb-99	Yes	
Ind. Agency	Finegold Library	Red	Green	Slipped	1			100%			No	
Ind. Agency	Lottery Commission	Green	Green	No Change	3	1	Oct-98	80-99%			Yes	
Ind. Agency	Mass. Bay Trans. Authority	Red	Red	No Change	6	7	May-99	20-40%	May-99	Aug-98	N/A	
Ind. Agency	Mass. Convention Center Authority	Yellow	Green	Slipped		1	Oct-98	100%	Jul-99	Jul-99	Yes	
Ind. Agency	Mass. Cultural Council	Green	Green	No Change		1	Feb-99	60-80%	Sep-98	Jan-99	In Progress	
Ind. Agency	Mass. Education Financing Author.	Green	Green	No Change		2	Feb-99	100%	Jan-99		N/A	
Ind. Agency	Mass. Health & Ed. Facilities Author.	Green	Green	No Change	1	1	Dec-97	80-99%	Oct-98		Yes	
Ind. Agency	Mass. Housing Partnership Fund	Yellow	Green	Slipped	1	2	Jul-98	100%	Jul-98	Jun-98	Yes	
Ind. Agency	Mass. Port Authority	Red	Red	No Change	26	3		80-99%			Yes	Sep-99
Ind. Agency	Mass. Turnpike Authority	Red	Red	No Change	5	5					In Progress	
Ind. Agency	Mass. Water Resources Authority	Red	Red	No Change	3		Mar-99	60-80%	Jul-99	Jul-99	In Progress	Feb-99
Ind. Agency	MassDevelopment	Green	Green	No Change	1	2	Mar-99	80-99%	Sep-97	Mar-99	No	
Ind. Agency	Office of State Comptroller	Green	Yellow	Improved	1		Dec-98	100%	Oct-98		Yes	
Ind. Agency	Office of Victim Assistance	Green	Green	No Change		2	Jun-98	100%	Nov-98		N/A	

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
Ind. Agency	Pension Reserves Investment Management Board	Green	Green	No Change			Jan-99	40-60%	Jan-99	Oct-99		
Ind. Agency	State Ethics Commission	Green	Green	No Change	1	1	Nov-98	100%	Dec-98		N/A	
Ind. Agency	Water Pollution Abatement Trust	Green	Green	No Change	1		Jun-98	100%		Jun-98	In Progress	Dec-99
Judiciary	Admin Office of Trial Courts	Red	Red	No Change	11	5					No	
Judiciary	Appeals Court	Yellow	Green	Slipped	1		Mar-99	80-99%			No	
Judiciary	Board of Bar Examiners	Red	Red	No Change	1			100%	May-98		Yes	
Judiciary	Comm. on Judicial Conduct	Green	Green	No Change				100%	Jul-98		N/A	
Judiciary	Supreme Judicial Court	Red	Red	No Change	1		Mar-99	20-40%			No	
Labor Dev.	Board of Conciliation & Arbitration	Green	Green	No Change							N/A	
Labor Dev.	Corp. for Bus Work & Learning (was Div. of Industr	Yellow	Green	Slipped	1	2	Feb-99	60-80%	Aug-97	Jun-99	No	
Labor Dev.	Div. of Apprenticeship	Green	Green	No Change	1		Jun-99	100%	Dec-96		No	
Labor Dev.	Div. of Employment & Training	Red	Red	No Change	6	4		60-80%	Aug-98		Yes	
Labor Dev.	Div. of Industrial Accidents	Red	Yellow	Slipped	2		Aug-98	60-80%	May-99	Mar-99	Yes	
Labor Dev.	Div. of Labor & Workforce Develop	Yellow	Green	Slipped			Jun-99			May-98	N/A	
Labor Dev.	Div. of Occupational Safety	Green	Green	No Change		4	Jun-99	100%	Dec-96		No	
Labor Dev.	Joint Labor Mgmt Committee	Green	Green	No Change					Jun-98		N/A	

Y2K Agency Status by Secretariat for Oct. - Dec. 1998

Secretariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Compliant	Phone Date	Facilities Date	Vendor Compliance	Business Continuity Plan Date
Labor Dev.	Labor Relations Comm	Red	Red	No Change	1			80-99%	Jul-98		Yes	
Pub. Safety	Architectural Access Board	Green	Green	No Change			Dec-98	100%			No	
Pub. Safety	Board of Bldg. Regulations	Green	Green	No Change		2	Dec-98	100%			No	
Pub. Safety	Bureau of Spec. Investigations	Green	Green	No Change	1		Dec-98	60-80%			No	
Pub. Safety	Chief Medical Examiner	Green	Green	No Change	1		Feb-99	40-60%			In Progress	
Pub. Safety	Criminal History Systems Board	Red	Yellow	Slipped	2	1	Dec-98	100%	Jun-99		In Progress	
Pub. Safety	Criminal Justice Programs Division	Green	Green	No Change			Feb-99	80-99%	Feb-99		N/A	
Pub. Safety	Criminal Justice Training Coun.	Green	Green	No Change		1	Jan-99	60-80%	May-99		Yes	
Pub. Safety	Dept. of Corrections	Red	Green	Slipped	2			80-99%			N/A	
Pub. Safety	Dept. of Fire Services	Red	Yellow	Slipped	2	3	Dec-98	100%	Aug-98	May-99	Yes	
Pub. Safety	Dept. of Public Safety	Green	Green	No Change		1	Dec-98	60-80%			N/A	
Pub. Safety	EO of Public Safety	Green	Green	No Change			Dec-98	40-60%	Dec-98		No	
Pub. Safety	Gov's Highway Safety Board	Green	Green	No Change			Jan-99	60-80%			N/A	
Pub. Safety	Governor's Alliance Against Drugs	Green	Green	No Change			Feb-99	100%	Dec-98		N/A	
Pub. Safety	Mass. Emergency Management	Green	Green	No Change			Nov-98	80-99%	Jul-97		Yes	
Pub. Safety	Merit Rating Board	Green	Yellow	Improved	3	2	Dec-98	100%			Yes	

Secret- ariat	Agency	Dec. 98 PMO Status	Sep. 98 PMO Status	Change	# Mission Critical Systems	# Essential Systems	LAN Date	Percent PC Com- pliant	Phone Date	Facilities Date	Vendor Com- pliance	Business Contin- uity Plan Date
Pub. Safety	Military Division - State	Red	Yellow	Slipped	1		Dec-98	80-99%	Aug-98	Dec-98	Yes	
Pub. Safety	Parole Board	Red	Red	No Change	4	2	Dec-98	0-20%	Feb-99	Oct-98	Yes	
Pub. Safety	Police Accreditation Commission	Green	Green	No Change				100%			N/A	
Pub. Safety	Registry of Motor Vehicles	Green	Green	No Change	3	3	Apr-99	60-80%			N/A	
Pub. Safety	State Police	Red	Red	No Change	3	1		80-99%	Nov-98		Yes	
Pub. Safety	Statewide Emergency Telecommunications Board	Red	Red	No Change	5	1	Dec-99	100%	Nov-98	May-99	In Progress	
Trans&C onst	Central Transportation Planning Staff	Yellow	Green	Slipped		2	May-99	60-80%			No	
Trans&C onst	EO of Transportation/Construction	Green		New			Jan-99	80-99%	Sep-98	Jun-99		
Trans&C onst	Mass. Aeronautics Comm	Green	Green	No Change			Dec-98	100%			No	
Trans&C onst	Mass. Highways	Red	Red	No Change	1	16		20-40%	Oct-99	Jun-99	In Progress	Mar-99



Notes

The Agency Business Continuity and Contingency Planning Process

Business Continuity Planning

The objective of Business Continuity Planning is to identify and assure that the primary, mission-critical functions performed by the Commonwealth of Massachusetts will continue without significant interruption into and throughout the year 2000. Agency Business Continuity Planning involves the following critical elements:

Year 2000 Business Continuity Planning

Planning Initiation	Establish a business continuity project work group and develop a high-level Business Continuity Planning strategy: Develop master schedule and milestones, and obtain executive support.
Planning Risk Assessment to Primary Business Functions	Assess the potential impact of mission-critical system failures on agency's core business processes. Define Year 2000 failure scenarios, and perform risk and impact analysis of each core business process. Assess infrastructure risks, and define the minimum acceptable levels of outputs for each core business process.
Identify Contingency Procedures	Identify and document contingency plans and implementation modes. Define triggers for activating contingency plans, and establish business resumption team for each core business process.
Practice and Reassess	Validate the agency's business continuity strategy. Develop and document contingency test plans. Prepare and execute tests. Update disaster recovery plans and procedures.

System Contingency Planning

The goal of Contingency Planning is to maximize an agency's functionality and speed of business resumption in the event of a system Year 2000 failure. Contingency planning integrates and acts on the results of an agency's risk management and business continuity planning processes. The output of this integration is a set of contingency plans – with a single plan established for each mission critical process and infrastructure component. Each contingency plan provides a description of the resources, staff roles, procedures and timetables needed for its implementation. The three critical process steps to System Contingency Planning are:

Year 2000 System Contingency Planning

Functionality	The degree to which the replacement functionally supports the production of a minimum acceptable level of output for a given core business process.
Deployment	The time needed to acquire, test and implement.
Cost	Life cycle cost, including acquisition, testing, training and maintenance.

To assist agencies with their Business Continuity and System Contingency Planning processes, the ITD Y2K PMO has designed templates that addresses the specific elements of effective plans. The templates have been made available to agencies in both hard copy and appear on the Y2K PMO web site.

Year 2000 Business Continuity Plan for Agency X

Revision #.#
Date:

Signature of Agency Year 2000 Project Coordinator

Date

Signature of Agency Head

Date

Signature of Cabinet Secretary

Date

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Year 2000 Business Continuity Plan for Agency X

Preface

The Commonwealth of Massachusetts, Year 2000 Program Management Office has developed this Year 2000 Business Continuity Plan Template to facilitate the efforts of Commonwealth agencies engaged in Year 2000 risk management and business continuity planning. The template is intended primarily for Agencies that have not previously performed formal business continuity planning, but other agencies may find the approach and tables helpful. The template can be used as a guideline to assist in conducting planning sessions as well as to record outputs of planning sessions. Agencies are encouraged to use the template throughout their Year 2000 business continuity planning efforts, and to publish updates at critical milestones.

Note that conventional wisdom dictates that 6 to 9 months are required to develop a good business continuity plan. This includes time to:

- *Develop the plan, the detailed contingency plans, and any required implementation and training materials*
- *Provide necessary training*
- *Test or drill selected contingency plans*
- *Perform other preliminary tasks required for specific contingency plans, e.g., establish contracts with back-up suppliers or secure additional staff.*

The template contains generic references like "Agency X" which each agency is expected to replace with agency-specific references. The template also contains numerous examples and explanatory comments to advise how certain sections should be completed. These sections are clearly marked using shaded, blue text in italics and should be deleted or replaced for the final version of the document. Agencies are expected to further tailor the template as required to meet internal standards or other agency objectives.

1. Introduction

1.1 Purpose

The purpose of this Year 2000 business continuity planning document is to describe how *Agency X* plans to minimize the impact of a Year 2000-induced failure or event on the operations of *Agency X* and the services it provides to the Commonwealth of Massachusetts. This document identifies likely Year 2000 hazards that will or could impact *Agency X*; describes the Year 2000 projects and risk mitigation activities currently planned, completed or underway to ensure maximum preparedness; and defines the contingency plans that *Agency X* will implement in response to Year 2000 events.

1.2 Scope

Executive management as indicated by the signatures on the cover has reviewed this plan and the contingency plans described in this document. The plans described in this document shall apply to all sites except as listed below:

- *List any exceptions here*

The following personnel categories are expected to review this plan:

- *List by job description/title*

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1.3 Strategy

Agency X recognizes that the Year 2000 problem, while technical in nature, is primarily a business problem. To effectively meet the Year 2000 challenge, the agency has initiated a number of Year 2000 preparedness activities and has established a Year 2000 business continuity planning program. Year 2000 preparedness activities are identified briefly in Sections 4 and 5 of the document to provide a more complete picture of the overall effort, but the primary focus of the document is to describe:

- The Year 2000 hazards that could cause an interruption to agency services, in spite of all preparedness activities,
- How the agency will act in response the hazards to resume, and
- The steps required to return to normal operations

Agency X's Year 2000 business continuity planning program was launched by naming an integrated team representing all segments of the agency:

- *Name – Title and/or Functional Area*

The team should include key personnel from the executive management, major business units, legal, finance, procurement, operations, engineering, and IS as well as the agency's Year 2000 project manager(s) who are well aware of the current risks facing the various remediation and preparedness projects.

The Year 2000 business continuity planning team meets *weekly* and reports directly to *Agency Head*. The planning effort addresses:

- Organization
 - Determining how the business continuity planning team will coordinate with other Year 2000 efforts underway in the agency
 - Establishing documentation standards and quality assurance criteria for required contingency plans
 - Developing/maintaining a master schedule for the planning effort and the delivery of interim and final products
 - Tracking progress
- Hazard identification
 - Identifying the agency's primary services
 - Determining operation priorities and minimum acceptable service levels
 - Determining potential system failure modes, e.g.:
 - The system is able to process non-date sensitive information
 - The system produces results with incorrect but acceptable errors
 - The system generates unreliable and/or unpredictable results
 - The system will not function
 - Identifying the business dependencies for each service, e.g., IT systems, embedded devices, external service providers, suppliers, key personnel, specific facilities
 - Identifying additional Year 2000 hazards to each service, e.g., power surges/outages, disruptions to transportation and communications infrastructure
- Analysis
 - Assessing the various hazards and identifying contingency options
 - Assessing existing business continuity and disaster recovery plans
 - Evaluating and selecting contingency options to develop, including estimation of resources and development schedule
 - Recommending additional preparedness activities to the Year 2000 project manager(s)
- Development
 - Assigning personnel to develop contingency plans
 - Developing and documenting contingency plans, including all related materials and preliminary activities
 - Reviewing contingency plans
- Final Preparation

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- Testing, training, and practicing contingency plans
- Assigning personnel to implement contingency plans

1.4 Preparation and Timeliness

This document has been prepared in a phased approach to record the findings and decisions of the Year 2000 Business Continuity Planning team.

At the time of publication the following issues remain open:

- *List all known open issues*

These items will be addressed in future revisions to this document. The next update to this document is scheduled for *Month, Year*.

Please forward any comments on this document to:

- *Name, phone, e-mail address*

1.5 References

- "Managing Year 2000 Risks", Commonwealth of Massachusetts, Information Technology Division, Year 2000 Program Management Office, September 23, 1998.
- "Year 2000 Computing Crisis: Business Continuity and Contingency Planning", United States General Accounting Office, Accounting and Information Management Division, March 1998.
- "Y2K Contingency Plan Guidelines", The MITRE Corporation,
http://www.mitre.org/research/y2k/docs/CONTINGENCY_PLAN.html
- *The Millennium Problem in Embedded Systems*, Chapter 15, "Year 2000 Contingency Planning for Embedded Systems", The Institution of Electrical Engineers,
http://www.iee.org.uk/2000risk/updates/chapt_15.htm
- *Add relevant agency documents, e.g., existing disaster recovery plans, contingency plans, and Y2K risk management documents.*

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2. Year 2000 Risk Management Terminology

The terminology used in discussions of risk management and business continuity planning often varies from source to source or seems vague. This section, provided by the Commonwealth of Massachusetts, Year 2000 Program Management Office, attempts to clarify key terms that are used throughout the remainder of this document.

Risk

Fully specified, a risk statement has 3 parts:

- The risk condition or event or hazard
- The probability of the hazard
- The impact of the hazard

Risk, as it applies to Year 2000, can be defined as the probability a Commonwealth agency will experience an interruption or failure to provide critical services to citizens due to Y2K problems. The impacts associated with Year 2000 risks are typically measured in terms of financial cost to the agency or expense to taxpayers, but some can be measured in terms of loss of credibility.

Risks should also be identified for Year 2000 projects. A Year 2000 project risk is the probability that a project fails to meet one or more of its objectives, such as its major schedule milestones. The impact of the failure is usually measured in terms of financial cost to the agency but items like staff morale and impact on other agency activities and priorities should also be considered.

Hazard (or Source of Risk)

Hazards or sources of risk can be categorized as internal or external. Internal Year 2000 hazards include potential problem areas like the following:

- Technical
 - Incomplete/inaccurate inventory/assessment of IT systems and embedded devices
 - Scope
 - Complexity
 - Failure dates
 - Defects created during remediation and testing phases
 - Inadequate system documentation
 - Impaired interoperability with remediated third-party products
 - Nonfunctioning or data-altering interfaces
 - Undetected errors
 - Inability to detect errors in timely manner
- Project
 - Inadequate support from executive management
 - Optimism, denial, or insensitivity to risks
 - Inadequate estimates of resource requirements
 - Loss/unavailability of key personnel
 - Inadequate remediation or test environment
 - Staff expertise
 - Staff turnover
 - Schedule delays
 - Ramp up time for new staff
 - Learning curve for new tools, methods

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- Delays in project dependencies
- Unforeseen problems
- Inadequate estimates of budget requirements
- Inadequate funding
- Legal
 - Payment terms and conditions
 - Year 2000 warranties
 - License agreement
 - Litigation

External hazards includes items like:

- Vendors
 - Inaccurate or ambiguous compliance information
 - Inability to develop a compliant version of the product
 - Insufficient testing of compliant versions of the product
 - Delays in developing compliant version of the product
 - Delay in shipping compliant version of the product due to backlog
 - Ability to stay in business to address any new compliance issues
- Suppliers and Service Providers
 - Ability to deliver in a timely manner
 - Ability to stay in business
- Data exchange partners
 - Erroneous assumptions about shared file structures
 - Delivery of corrupted data
 - Coordination

Risk Management

Risk management is the process an agency employs to proactively monitor Year 2000 risks and to implement risk mitigation activities. This process is intended to ensure maximum preparedness for problems that may occur at the century changeover. Risk management includes the following key steps:

- Risk identification.
- Risk assessment
- Determination of risk mitigation options
- Risk mitigation
- Tracking progress and
- Repeating the process

Risk Identification

The purpose of risk identification is to list the possible Year 2000 failures or hazards. This activity is often performed by examining the various sources of risks. (See "Hazard" above.)

Risk Assessment

During risk assessment, hazards are analyzed to determine:

- The cost/impact, and
- The estimated probability the event will occur.

At the conclusion of this step, the risks are prioritized for risk mitigation.

Risk Mitigation

Risk mitigation is the action or set of actions put in place specifically to reduce (1) the probability that a risk will occur or (2) the cost/impact of a risk. Year 2000 remediation projects for mission critical and essential systems are efforts intended to reduce the probability of Year 2000 risks, while the goal of contingency planning is primarily to reduce the impact of a Year 2000 failure.

Risk mitigation activities can also be classified as:

- Preparedness activities for efforts initiated and completed prior to expected failure dates includes actions like:
 - Involvement of executive management to ensure remediation efforts are scheduled and performed in accordance with business priorities
 - Development of procedures to recognize degradation of system functions
 - Development of methods to preserve and protect system data
 - Development of methods to detect and correct corrupt data
 - Staffing plans and incentives for personnel
 - Independent Verification and Validation
 - Year 2000 awareness programs for end-users
 - Development of Year 2000 business continuity plans
- Business continuity and contingency plans for efforts that will be initiated in response to Year 2000 trigger events

Contingency Plan

With respect to business operations, a contingency plan specifies an alternative approach for providing a service or fulfilling a function that can be put into effect if a Year 2000 event occurs that significantly disrupts normal operations. Contingency plans are the primary products of Year 2000 business continuity planning efforts. For example, a contingency plan for performing services out of Site A if Site B is unavailable. Contingency plans developed for business continuity plans tend to fall into 3 categories:

- Emergency response
- Primary contingency
- Long-term contingency

Contingency plans can also be part of a Year 2000 preparedness effort. For example, a Year 2000 project team that has a very aggressive schedule for remediating a legacy system may require a contingency plan to develop a patch for the production system if the remediation effort fails to meet a certain milestone by a specified date. This contingency plan is properly a part of the remediation effort rather than the business continuity planning effort.

Trigger

An event that indicates implementation of a contingency plan may be required. A trigger requiring an emergency response is often the occurrence of a hazard. A trigger for a primary contingency plan may be the inability of the maintenance team to correct a defect within 24 hours of a system failure. A trigger for a long-term contingency plan could be the occurrence of one or more hazards that indicate normal operations cannot be restored for an indefinite amount of time.

Business Continuity Planning

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The goal of business continuity planning is to develop a set of interim business processes that will protect business interests during an operational discontinuity. Year 2000 business continuity planning includes activities to:

- Identify and evaluate likely Year 2000 events that may occur in spite of all previously defined Year 2000 preparations
- Develop contingency plans that the agency will put in place in response to a Year 2000 event
- Develop recovery plans for the return to normal operations after the need for the contingency action has passed.

Business continuity plans must consider health and safety, customer services and deliveries, access to supplies, and business operations. They must describe the actions the agency will take to ensure continuity of core business processes.

For a certain set of Year 2000 events, the appropriate Year 2000 business continuity plan will mirror the agency's general business continuity (or disaster recovery) plan. For other Year 2000 events, an existing disaster recovery plan offers no solution because the cause of the event will also exist at the hot site or on the backup device/software.

In this document, Year 2000 business continuity planning is viewed as an integral part of the Year 2000 risk management program, rather than an adjunct to general business continuity (or disaster recovery) planning since:

- The staff performing Year 2000 business continuity planning often includes a significant portion of the staff performing the more general Year 2000 risk management program.
- Status of existing Year 2000 projects will impact the identification and evaluation of likely Year 2000 events being considered for business continuity planning.
- The business continuity activities to identify and evaluate likely Year 2000 events may lead to the identification of additional Year 2000 projects (or new tasks for existing Year 2000 projects) that can be launched immediately to reduce the probability of a risk.

3. Year 2000 Hazards for Agency Services

This section describes the primary services provided by *Agency X* and identifies possible Year 2000 hazards that could cause a disruption in the delivery of these services. Contingency plans to offset the possible disruptions are also identified. They are described in detail in Section 6.

3.1 Primary Services Provided

Identify all significant services provided by the agency. Be sure to include the non-IT business function experts to ensure identification of critical services that may not depend directly on IT systems but may rely on infrastructure, key suppliers, and external service providers.

These services should be defined at a level of detail that allows meaningful analysis of the hazards and identification of contingency options, but not so detailed that this process becomes overly tedious. The Year 2000 Business Continuity Planning team may need to iterate the listing of services with the other analysis steps in Section 3 before finalizing the list. It is recommended that agencies begin with a short list of services.

#	Service Description	Recipients ¹	Maximum Allowable Disruption (Days) ²	Criticality ³	Agency Point of Contact ⁴
1.0	Reimburse vendors for xxx				
1.1	Maintain xxx database				
1.2	Process invoices				
1.3	Issue checks				
2.0	xxx				
...					
8.0	General Operations				
8.1	Maintenance support for xxx				
8.2	Hot-line for xxx				
8.3	Help desk for xxx				
8.4	Analyze data on xxx				
8.5	Publish information on xxx				

¹ Brief description of who depends on this service.

² Maximum time disruption can exist without agency implementing contingency plan.

³ Mission Critical, Essential or Other Required.

⁴ Person responsible for authorizing a contingency action in case of service disruption.

3.2 Year 2000 Hazard Analysis for Services

For each service listed in the table provided in Section 3.1, use the table below to identify the possible Year 2000 hazards that could cause an interruption of the service. Then identify the emergency responses and contingency plans required to contend with the interruption. A complete listing of hazards requires a thorough assessment of the dependencies for each service.

Note that it is expected that many contingency plans will address multiple hazards for a specific service and some contingency plans will address similar hazards for multiple services. Most agencies will find it easier to first identify the needed contingency plans for each service & hazard and then try to group and merge the contingency plans before beginning the contingency plan specification process.

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Note that the table is a subset of the HazAnalysisWorksheet.xls, which may be more helpful during working sessions.

This section identifies possible Year 2000 hazards that could cause a disruption of agency and the contingency plans (including emergency responses) the agency will employ to counter a disruption. Descriptions of the various contingency plans are described in Section 6.

3.2.1 Service Description 1 (this should match the first service description listed in the table in Section 3.1)

Year 2000 Hazard	Approved Emergency Response Descriptions & Section 6 Refs	Probable Duration of Hazard (Days)	Approved Primary Contingency Descriptions & Section 6 Refs	Long Term Duration of Hazard (Days)	Approved Long Term Contingency Descriptions & Section 6 Refs
<i>Facilities</i>					
<i>Electricity outage at Location X</i>					
<i>Security outage at Location X</i>					
<i>Phone system outage at Location X</i>					
<i>HVAC problems at Location X</i>					
<i>Personnel</i>					
<i>IS staff unavailability¹ at Location X</i>					
<i>Maintenance staff unavailability¹ at Location X</i>					
<i>Operations staff unavailability¹ at Location X</i>					
<i>Management staff unavailability¹ at Location X</i>					
<i>External</i>					
<i>Loss of Supplier A</i>					
<i>Loss of Vendor B</i>					
<i>Loss of Service Provider C</i>					
<i>Loss of Interface with Organization D</i>					
<i>IT</i>					
<i>Loss of System A</i>					
<i>Loss of System B</i>					
<i>Degradation of ABC Database</i>					

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<i>Loss of LAN/WAN</i>					
<i>End Users</i>					
<i>Loss of 10% of PCs</i>					
<i>Corrupted/lost files</i>					
<i>Embedded devices</i>					
<i>Problem with device type Q</i>					
<i>Problem with device type R</i>					
<i>Basic Community Services</i>					
<i>General electricity outage or power surges</i>					
<i>General telephone service outage or restrictions</i>					
<i>Restricted water supplies</i>					
<i>Impaired public transportation</i>					

¹ Unavailability of staff may occur at locations having no Y2K problems due to Y2K transportation problems or Y2K problems affecting employees' home communities.

3.2.2 Service Description 2 (from table in Section 3.1)

Repeat the format as in Section 3.2.1 for as many of these sections as there are services.

Year 2000 Hazard	Approved Emergency Response Descriptions & Section 6 Refs	Probable Duration of Hazard (Days)	Approved Primary Contingency Descriptions & Section 6 Refs	Long Term Duration of Hazard (Days)	Approved Long Term Contingency Descriptions & Section 6 Refs

4. Year 2000 Preparedness Activities

This section describes the primary Year 2000 preparedness activities performed, planned, or in progress at Agency X.

It is expected that this section will initially reflect Year 2000 remediation projects launched prior to the designation of the Business Continuity Planning team, but that the section will grow as the team evaluates Year 2000 hazards and identifies additional preparedness activities that should be implemented.

4.1 Assessment/Remediation/Replacement Projects

Project Description	Point of Contact	Actual/ Scheduled Completion Date	Includes Future Date Testing (Yes/No)	Includes IV&V (Yes/No)	Includes Contingency Plans (Yes/No)	Contingency Plan References
<i>System A</i>						
<i>System B</i>						
<i>Agency PCs</i>						
<i>Agency LANs/WANs</i>						
<i>Facility 1</i>						
<i>Facility 2</i>						
<i>Phone/voice mail system 1</i>						

4.2 Awareness/Training Programs

Program Description	Target Group	Point of Contact	Actual/ Scheduled Completion Date	Strategies
<i>General Awareness</i>	<i>All agency personnel</i>		<i>3/1/2000</i>	<i>Agency newsletter; agency web site on intranet</i>
<i>Executive Awareness</i>	<i>Upper management</i>			<i>Year 2000 project reviews</i>
<i>Y2K Team Development</i>	<i>Y2K team</i>			<i>Attend Commonwealth Y2K User Group and workshops; attend DCI conference on contingency planning</i>
<i>PC BIOS Issues</i>	<i>PC support staff</i>			<i>Training program for PC support staff at all sites</i>
<i>Excel Spreadsheet Verification</i>	<i>End users</i>			<i>User information document; designation of Excel guru and purchase of spreadsheet scanning tool to assist users; hour-long training session</i>

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4.3 Additional Year 2000 Risk Mitigation/Preparedness Programs

Program Description	Scope	Point of Contact	Status*	Comments
Y2K Risk Management Program	All agency Y2K projects			
Business Continuity Planning	Agency-wide			
Formal Vendor Management Program				Letters on file for critical vendors
Contracts Review				
Forms Review	All preprinted forms used by agency		Complete	Changes required for 2000 have been identified; procurement for 2000 is scheduled for Oct 99
Staffing plan for Dec. 1, 1999 – Jan. 31, 2000, including identification of swat teams				Description in Section 5.1
Year 2000 Roll-Over Plan for IT systems	Systems A, B, and C and Database X		Materials in progress	Description in Section 5.2
On-site maintenance personnel monitoring critical embedded devices during the century roll-over				
Year 2000 Roll-Over Plan for year-end run of XXX			Identified	Intent is to close books Dec. 22, 99 and run year-end XXX on Dec. 27, 99 rather than Jan. 5, 2000.
Data Integrity Procedures for Database X & Report Y			Materials in progress	See "Year 2000 Roll-Over Plan for IT systems"
Data Integrity Procedures for Interfaces with Organization Q				
Establishment of support agreements with Supplier Z				In contract negotiations
Contract with XYZ for on-site support for XXXX				
Order supplies required for Jan-Feb 2000 operations by Oct 1999				
Lists & procedures for emergency notification of personnel			Materials in progress	These lists will support a variety of contingency plans.
Additional Y2K Preparations and Checklists for Agency Help Desk				
Establishment of a short term help desk for PC users				
Procedures to identify security breaches				
Procedures and standards for new personnel to ensure				

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<i>compliance is maintained.</i>				
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* Status: Identified, Defined, Approved, Materials in Progress (procedures/training materials are being developed).
Training in progress; Ready

5. Century Roll-Over Plans

In spite of all the Year 2000 remediation efforts underway or completed, *Agency X* understands that there is a high likelihood of multiple defects that will occur during the December 31, 1999 to January 1, 2000 roll-over. While most of these defects are expected to be rather straightforward to resolve, it is possible that the number of problems may overwhelm the normal maintenance process. To proactively counter and control this scenario, *Agency X* plans to implement the following roll-over plans.

Agencies should also consider:

- *The need to place orders to suppliers early to ensure delivery before January 1, 2000 wherever possible.*
- *Possible increased demands from the public requesting information on how to cope with Year 2000 problems.*
- *Possible increased demands by end-users on PC support groups and help desks.*

5.1 Staffing Plan for Dec. 1, 1999 – Jan. 31, 2000, Including Identification of Swat Teams

This section should describe the personnel requirements needed for the century roll-over. The Year 2000 Business Continuity Planning team should include personnel required to perform proactive roll-over plans as well as personnel required to field Year 2000 "swat" teams which will respond to Year 2000 problems as they occur. The staffing plan should also describe how the agency will ensure availability of the personnel. For example, an agency may decide to deny/limit vacation time to key personnel during this period. Depending on the criticality, the staffing plan may need to address communications and transportation contingencies for key personnel.

Swat teams may be needed for

- *Setting priorities/triage*
- *IT systems*
- *Non-IT systems*
- *Communications (to ensure executive management, personnel at affected facilities, users, data exchange partners, vendors, constituents, etc. have been alerted to the existence of a problem and the launch of a contingency plan).*

Note that staffing plans should not depend on single individuals. Alternative personnel must be identified.

5.2 Year 2000 Roll-Over Plan for Systems A, B, and C

This section describes the roll-over plan for specific major systems. In the following example, the basic contingency plan form is used (see also the PMO's Year 2000 Contingency Plan template).

The primary goal for a Year 2000 Roll-Over Plan is to avoid defects that are expected to only occur during on-line Year 2000 roll-over. By powering down before the century roll-over and powering up after the century roll-over the roll-over hazard is avoided. This approach has the additional advantage of allowing the systems to be brought back into production in a highly controlled environment that facilitates early identification of other latent defects.

Date Last Revised: November 3, 1998

Date Last Reviewed:

Approved by:

Probable Trigger Event(s): January 1, 2000

Probable Trigger Event Date(s): January 1, 2000

*Commonwealth of Massachusetts, Year 2000 Program Management Office
Year 2000 Business Continuity Plan Template (Rev. 1.0)*

Probability (<20%, 20-40%, 40-60%, 60-80%, >80%): 60-80%

Description of Impact: *Numerous IS glitches*

Estimate of Financial (e.g., loss, liabilities, and fines) Impact:

Estimate of Intangible Impact (1=Very Low, 2=Low, 3= Medium, 4=High; =5Very High):

Expected Time to Implement: *Within one day of trigger occurrence*

Agency Contact if trigger event occurs: *Name, phone number, pager*

Alternate Contact: *Name, phone number, pager*

Assumptions: *facility operations and personnel availability are normal through December 29, 1999 and after January 2, 2000*

Goal(s): *(1) avoid defects that only occur during on-line Year 2000 roll-over. (2) detect and correct existing Year 2000 defects in a controlled environment.*

Expected Change in Impact if Contingency Plan Is Implemented:

Expected Duration of Plan:

Maximum Duration of Plan:

Contingency Actions and Requirements:

Action	Resources Required*	Procedures/ Materials Required	Training/ Drills Required	Lead Time Req'd	Est. Cost to Prepare	Est. Cost to Perform
<i>Employ data integrity tests/procedures on databases at monthly intervals starting May 1999</i>		<i>data integrity tests/procedures for databases</i>				
<i>Perform weekly database backups starting November 15, 1999</i>						
<i>Employ data integrity tests/procedures on databases at weekly intervals starting December 1999</i>						
<i>Perform daily database backups starting December 28, 1999</i>						
<i>Employ data integrity tests/procedures on databases daily starting December 1999</i>						
<i>Schedule a power down for XXX on December 29, 1999</i>						
<i>Power up and verify platform XXX on January 3, 2000</i>						
<i>Bring up and verify System A</i>						
<i>Bring up and verify System B</i>						
<i>Bring up and verify System C</i>						
<i>Verify database X</i>						

* Staffing and equipment

Total Cost to Prepare for Contingency Plan Implementation (materials development, training, new contracts):

Total Cost to Implement Plan (for expected duration of plan):

Business Days Required to Implement:

Possible Constraints:

Date Procedures/Materials Completed:

Date Training/Drills Completed:

*Commonwealth of Massachusetts, Year 2000 Program Management Office
Year 2000 Business Continuity Plan Template (Rev. 1.0)*

Date Contingency Plan Tested:

Other Contingency Plans Related to This Risk: (provide references)

Other Comments: *If additional documentation for this plan is available (e.g., a detailed plan, written procedures or training materials), include the reference here.*

Note: Complex contingency plans will require more detailed documentation.

6. Business Continuity Contingency Plans

This section describes the contingency plans (including emergency responses) the agency will employ to counter disruptions identified in Section 3. These include the following:

Contingency Type	Contingency Plan Description	Point of Contact	Actual/ Scheduled Completion Date	Criti- cality ¹	Status ²	Section 6 Ref
Facility	<i>Emergency Response for electricity outage at Location X (assuming other facilities OK)</i>					
Personnel	<i>Overcoming maintenance staff unavailability¹ at Location X</i>					
Supplier						
Vendor						
Service Provider						
External Interface						
IT	<i>Emergency Response for Loss of System A</i>					
IT	<i>Remediation of System B is delayed beyond expected failure date</i>					
IT	<i>Response to degradation of ABC Database</i>					
IT	<i>Loss of LAN/WAN</i>					
End User						
Embedded Device						
Basic Community Service	<i>Loss of electricity to all facilities</i>					

¹ Mission Critical, Essential or Other Required.

² Status: Identified, Defined, Approved, Materials in Progress (procedures/training materials are being developed), Training in progress, Ready

The above table is used to establish an order to the contingency plans that is potentially different from the order the contingency plans appear in the document. This allows the contingency plans to be added to the document in order of development.

6.1. Contingency Plan A

6.1.1 Description

*Commonwealth of Massachusetts, Year 2000 Program Management Office
Year 2000 Business Continuity Plan Template (Rev. 1.0)*

This section provides a brief overview of the contingency plan. It is a completed contingency plan form provided in the PMO's Year 2000 Contingency Plan template. The form can also be used separately during working sessions to capture information needed to evaluate and compare various contingency options

Date Last Revised:

Date Last Reviewed:

Approved by:

Probable Trigger Event(s): *Remediation effort does not meet Milestone X by date*

Probable Trigger Event Date(s):

Probability (<20%, 20-40%, 40-60%, 60-80%, >80%):

Description of Impact:

Estimate of Financial (e.g., loss, liabilities, and fines) Impact:

Estimate of Intangible Impact (1=Very Low, 2=Low, 3= Medium, 4=High; =5Very High):

Expected Time to Implement: *Within one day of trigger occurrence*

Agency Contact if trigger event occurs: *Name, phone number, pager*

Alternate Contact: *Name, phone number, pager*

Assumptions: *example: facility operations and personnel availability are normal*

Goal(s): *develop a patch to allow continued operations in degraded mode until remediation effort is complete.*

Patch must be installed no later than date.

Expected Change in Impact if Contingency Plan Is Implemented:

Expected Duration of Plan:

Maximum Duration of Plan:

Contingency Actions and Requirements:

Action	Resources Required*	Procedures/ Materials Required	Training/ Drills Required	Lead Time Req'd	Est. Cost to Prepare	Est. Cost to Perform
<i>Notify xxx</i>						
<i>Perform yyy</i>						
<i>Recover data by zzz</i>						
<i>Terminate contingency plan by www</i>						

* Staffing, equipment, facilities, supplies, communications

Total Cost to Prepare for Contingency Plan Implementation (materials development, training, new contracts):

Total Cost to Implement Plan (for expected duration of plan):

Business Days Required to Implement:

Possible Constraints: *Example: vendor required for step # may have a backlog.*

Date Procedures/Materials Completed:

Date Training/Drills Completed:

Date Contingency Plan Tested:

Other Contingency Plans Related to This Risk: (provide references)

Other Comments: *If additional documentation for this plan is available (e.g., a detailed plan, written procedures or training materials), include the reference here.*

Note: *Complex contingency plans will require more detailed documentation.*

*Commonwealth of Massachusetts, Year 2000 Program Management Office
Year 2000 Business Continuity Plan Template (Rev. 1.0)*

6.1.2 References

This contingency plan is fully specified in "title of contingency plan document". (See the PMO's Year 2000 Contingency Plan template.)

6.1.3 Recovery Actions

Use this section as necessary to fully specify how the agency will return to normal operations after the implementation of this contingency plan. Remember that the people responding to the contingency scenario may not have been involved in the development of the contingency plan or the business continuity plan.

The format for this section will vary according to the types of actions. For example, in some cases a detailed or annotated list of actions is appropriate. In other cases a project plan may more useful.

6.2. Contingency Plan B

Agency X
Year 2000 Contingency Plan for
System ABC – Scenario Q

Revision #.#
Date:

Signature of Agency Year 2000 Project Coordinator

Date

Signature of Agency Head

Date

Signature of Cabinet Secretary

Date

**Agency X
Year 2000 Contingency Plan for
System ABC – Scenario Q**

Preface

This template envisions the contingency plan as a relatively short document used to specify a specific set of actions to be implemented in response to a Year 2000 hazard.

The template is appropriate for contingency planning required to support business continuity and for Year 2000 remediation projects. (See the definition of Contingency Plan provided in the Terminology section below.)

The document is not intended to repeat in detail the agency's mission, its strategy for risk management and business continuity planning, or a the goals of a Year 2000 remediation project. The agency should have other documentation for those issues.

The Commonwealth of Massachusetts, Year 2000 Program Management Office has developed this Year 2000 Contingency Plan Template to facilitate efforts of Commonwealth agencies engaged in Year 2000 contingency planning. The template is intended primarily for Agencies that have not previously performed formal contingency planning, but other agencies may find the approach helpful.

The template can be completed in a phased approach as the risk management or business continuity planning team performs the following activities:

- *Hazard identification*
 - *Business continuity*
 - *Identifying the agency's primary services*
 - *Determining operation priorities and minimum acceptable service levels*
 - *Determining potential system failure modes*
 - *The system is able to process non-date sensitive information*
 - *The system produces results with incorrect but acceptable errors*
 - *The system generates unreliable and/or unpredictable results*
 - *The system will not function*
 - *Identifying the business dependencies for each service, e.g., IT systems, embedded devices, external service providers, suppliers, key personnel, specific facilities*
 - *Identifying additional Year 2000 hazards to each service, e.g., power surges/outages, disruptions to transportation and communications infrastructure*
 - *Risk management for Year 2000 projects*
 - *Identifying the value of the project to the agency and which requirements or objectives are mission critical*
 - *Determining priorities for requirements or objectives*
 - *Identifying the dependencies for each major milestone used to track progress on completing a requirement or objective*
 - *Identifying additional Year 2000 hazards*
- *Analysis*
 - *Assessing the various hazards and identifying contingency options*
 - *Assessing existing business continuity and disaster recovery plans*
 - *Evaluating and selecting contingency options to develop, including estimation of resources and development schedule*
 - *Recommending additional preparedness activities to the Year 2000 project manager(s)*
- *Development*
 - *Assigning personnel to develop contingency plans*

*Commonwealth of Massachusetts, Year 2000 Program Management Office
Year 2000 Contingency Plan Template (Rev. 1.0)*

- *Developing and documenting contingency plans, including all related materials and preliminary activities*
- *Reviewing contingency plans*
- *Final Preparation*
 - *Testing, training, and practicing contingency plans*
 - *Assigning personnel to implement contingency plans*

The template contains generic references like "Agency X" which each agency is expected to replace with agency-specific references. The template also contains numerous examples and explanatory comments to advise how certain sections should be completed. These sections are clearly marked using shaded, blue text in italics and should be deleted or replaced for the final version of the document. Agencies are expected to further tailor the template as required to meet internal standards or other agency objectives.

Terminology:

The terminology used in discussions of risk management and business continuity planning often varies from source to source or seems vague. The Commonwealth of Massachusetts, Year 2000 Program Management Office, is using the following terminology:

Risk

Fully specified, a risk statement has 3 parts:

- *The risk condition or event or hazard*
- *The probability of the hazard*
- *The impact of the hazard*

Risk, as it applies to Year 2000, can be defined as the probability a Commonwealth agency will experience an interruption or failure to provide critical services to citizens due to Y2K problems. The impacts associated with Year 2000 risks are typically measured in terms of financial cost to the agency or expense to taxpayers, but some can be measured in terms of loss of credibility.

Risks should also be identified for Year 2000 projects. A Year 2000 project risk is the probability that a project fails to meet one or more of its objectives, such as its major schedule milestones. The impact of the failure is usually measured in terms of financial cost to the agency but items like staff morale and impact on other agency activities and priorities should also be considered.

Hazard (or Source of Risk)

Hazards or sources of risk can be categorized as internal or external. Internal Year 2000 hazards include potential problem areas like the following:

- *Technical*
 - *Incomplete/inaccurate inventory/assessment of IT systems and embedded devices*
 - *Scope*
 - *Complexity*
 - *Failure dates*
 - *Defects created during remediation and testing phases*
 - *Inadequate system documentation*
 - *Impaired interoperability with remediated third-party products*
 - *Nonfunctioning or data-altering interfaces*
 - *Undetected errors*
 - *Inability to detect errors in timely manner*
- *Project*

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Year 2000 Contingency Plan Template (Rev. 1.0)*

- *Inadequate support from executive management*
- *Optimism, denial, or insensitivity to risks*
- *Inadequate estimates of resource requirements*
- *Loss/unavailability of key personnel*
- *Inadequate remediation or test environment*
- *Staff expertise*
- *Staff turnover*
- *Schedule delays*
 - *Ramp up time for new staff*
 - *Learning curve for new tools, methods*
 - *Delays in project dependencies*
 - *Unforeseen problems*
- *Inadequate estimates of budget requirements*
- *Inadequate funding*
- *Legal*
 - *Payment terms and conditions*
 - *Year 2000 warranties*
 - *License agreement*
 - *Litigation*

External hazards includes items like:

- *Vendors*
 - *Inaccurate or ambiguous compliance information*
 - *Inability to develop a compliant version of the product*
 - *Insufficient testing of compliant versions of the product*
 - *Delays in developing compliant version of the product*
 - *Delay in shipping compliant version of the product due to backlog*
 - *Ability to stay in business to address any new compliance issues*
- *Suppliers and Service Providers*
 - *Ability to deliver in a timely manner*
 - *Ability to stay in business*
- *Data exchange partners*
 - *Erroneous assumptions about shared file structures*
 - *Delivery of corrupted data*
 - *Coordination*

Risk Management

Risk management is the process an agency employs to proactively monitor Year 2000 risks and to implement risk mitigation activities. This process is intended to ensure maximum preparedness for problems that may occur at the century changeover. Risk management includes the following key steps:

- *Risk identification.*
- *Risk assessment*
- *Determination of risk mitigation options*
- *Risk mitigation*
- *Tracking progress and*
- *Repeating the process*

Risk Identification

Commonwealth of Massachusetts, Year 2000 Program Management Office Year 2000 Contingency Plan Template (Rev. 1.0)

The purpose of risk identification is to list the possible Year 2000 failures or hazards. This activity is often performed by examining the various sources of risks (see "Hazard" above).

Risk Assessment

During risk assessment, hazards are analyzed to determine:

- The cost/impact, and*
- The estimated probability the event will occur.*

At the conclusion of this step, the risks are prioritized for risk mitigation.

Risk Mitigation

Risk mitigation is the action or set of actions put in place specifically to reduce (1) the probability that a risk will occur or (2) the cost/impact of a risk. Year 2000 remediation projects for mission critical and essential systems are efforts intended to reduce the probability of Year 2000 risks, while the goal of contingency planning is primarily to reduce the impact of a Year 2000 failure.

Risk mitigation activities can also be classified as:

- Preparedness activities for efforts initiated and completed prior to expected failure dates includes actions like:*
 - Involvement of executive management to ensure remediation efforts are scheduled and performed in accordance with business priorities*
 - Development of procedures to recognize degradation of system functions*
 - Development of methods to preserve and protect system data*
 - Development of methods to detect and correct corrupt data*
 - Staffing plans and incentives for personnel*
 - Independent Verification and Validation*
 - Year 2000 awareness programs for end-users*
 - Development of Year 2000 business continuity plans*
- Business continuity and contingency plans for efforts that will be initiated in response to Year 2000 trigger events*

Contingency Plan

With respect to business operations, a contingency plan specifies an alternative approach for providing a service or fulfilling a function that can be put into effect if a Year 2000 event occurs that significantly disrupts normal operations. Contingency plans are the primary products of Year 2000 business continuity planning efforts. For example, a contingency plan for performing services out of Site A if Site B is unavailable. Contingency plans developed for business continuity plans tend to fall into 3 categories:

- Emergency response*
- Primary contingency*
- Long-term contingency*

Contingency plans can also be part of a Year 2000 preparedness effort. For example, a Year 2000 project team that has a very aggressive schedule for remediating a legacy system may require a contingency plan to develop a patch for the production system if the remediation effort fails to meet a certain milestone by a specified date. This contingency plan is properly a part of the remediation effort rather than the business continuity planning effort.

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Year 2000 Contingency Plan Template (Rev. 1.0)*

Trigger

An event that indicates implementation of a contingency plan may be required. A trigger requiring an emergency response is often the occurrence of a hazard. A trigger for a primary contingency plan may be the inability of the maintenance team to correct a defect within 24 hours of a system failure. A trigger for a long-term contingency plan could be the occurrence of one or more hazards that indicate normal operations cannot be restored for an indefinite amount of time.

Business Continuity Planning

The goal of business continuity planning is to develop a set of interim business processes that will protect business interests during an operational discontinuity. Year 2000 business continuity planning includes activities to:

- Identify and evaluate likely Year 2000 events that may occur in spite of all previously defined Year 2000 preparations*
- Develop contingency plans that the agency will put in place in response to a Year 2000 event*
- Develop recovery plans for the return to normal operations after the need for the contingency action has passed.*

Business continuity plans must consider health and safety, customer services and deliveries, access to supplies, and business operations. They must describe the actions the agency will take to ensure continuity of core business processes.

For a certain set of Year 2000 events, the appropriate Year 2000 business continuity plan will mirror the agency's general business continuity (or disaster recovery) plan. For other Year 2000 events, an existing disaster recovery plan offers no solution because the cause of the event will also exist at the hot site or on the backup device/software.

In this document, Year 2000 business continuity planning is viewed as an integral part of the Year 2000 risk management program, rather than an adjunct to general business continuity (or disaster recovery) planning since:

- The staff performing Year 2000 business continuity planning often includes a significant portion of the staff performing the more general Year 2000 risk management program.*
- Status of existing Year 2000 projects will impact the identification and evaluation of likely Year 2000 events being considered for business continuity planning.*
- The business continuity activities to identify and evaluate likely Year 2000 events may lead to the identification of additional Year 2000 projects (or new tasks for existing Year 2000 projects) that can be launched immediately to reduce the probability of a risk.*

1. Background

This section should contain a paragraph or two that briefing describes the:

- Purpose or context*
- Scope, who is required to review and use the document*
- Status and open issues, so that readers will know if they are reading the final document*
- Reference to any higher level document, e.g., the business continuity plan or the remediation project plan.*

The next update to this document is scheduled for Month, Year.

Please forward any comments on this document to:

- Name, phone, e-mail address*

*Commonwealth of Massachusetts, Year 2000 Program Management Office
Year 2000 Contingency Plan Template (Rev. 1.0)*

2. Overview

This section is basically a completed form. The form can also be used separately during working sessions to capture information needed to evaluate and compare various contingency options:

Date Last Revised:

Date Last Reviewed:

Approved by:

Probable Trigger Event(s): *Remediation effort does not meet Milestone X by date*

Probable Trigger Event Date(s):

Probability (<20%, 20-40%, 40-60%, 60-80%, >80%):

Description of Impact:

Estimate of Financial (e.g., loss, liabilities, and fines) Impact:

Estimate of Intangible Impact (1=Very Low, 2=Low, 3= Medium, 4=High; =5Very High):

Expected Time to Implement: *Within one day of trigger occurrence*

Agency Contact if trigger event occurs: *Name, phone number, pager*

Alternate Contact: *Name, phone number, pager*

Assumptions: *example: facility operations and personnel availability are normal*

Goal(s): *develop a patch to allow continued operations in degraded mode until remediation effort is complete. Patch must be installed no later than date.*

Expected Change in Impact if Contingency Plan Is Implemented:

Expected Duration of Plan:

Maximum Duration of Plan:

Contingency Action and Requirements:

Action	Resources Required*	Procedures/ Materials Required	Training/ Drills Required	Lead Time Req'd	Est. Cost to Prepare	Est. Cost to Perform
<i>Notify xxx of Trigger Event</i>						
<i>Perform yyy</i>						
<i>Recover data by doing zzz</i>						
<i>Terminate contingency plan by doing www</i>						

* Staffing, equipment, facilities, supplies, communications

Total Cost to Prepare for Contingency Plan Implementation (materials development, training, new contracts):

Total Cost to Implement Plan (for expected duration of plan):

Business Days Required to Implement:

Possible Constraints: *Example: vendor required for step # may have a backlog.*

Date Procedures/Materials Completed:

Date Training/Drills Completed:

Date Contingency Plan Tested:

Other Contingency Plans Related to This Risk: (provide references)

Other Comments: *If additional documentation for this plan is available (e.g., training materials or written procedures included in another contingency plan), include the reference here.*

3. Detailed Description of Contingency Actions

Use this section as necessary to fully specify each contingency action. Remember that the people trying to implement the plan may not have been involved in its development.

The format for this section will vary according to the types of actions. For example, in some cases a detailed or annotated list of actions is appropriate. In other cases a project plan may more useful.

4. Procedures and Materials

Use this section as a repository for materials require for the various contingency actions.

Independent Verification and Validation (IV&V)

Mission Critical agencies of the Commonwealth are being asked to perform Independent Verification and Validation (IV&V) on their mission critical systems.

As defined, IV&V is the verification and validation processes performed by an organization with a specified degree of technical, managerial, and financial independence from the development organization. "Verification" is defined as confirmation by examination and provision of objective evidence that specified requirements have been fulfilled. "Validation" is defined as the confirmation by examination and provision of objective evidence that the particular requirements for a specific intended use are fulfilled. The working definition used by the Department of Labor is that "validation" asks and answers the question, "Are we doing the right thing?" while "verification" asks and answers the question, "Are we doing the thing right?"

To assist agencies with their IV&V process, the Operational Services Division has contracted with a specific grouping of vendors qualified to address the IV&V issue of Year 2000 compliance. The listing of those vendors follows:

IV&V CONTRACT AND VENDOR INFORMATION

Y2K Independent Verification & Validation Services Contractors				
Contractor	MMARS Vendor Code	Contact	Phone/ Facsimile	E-Mail Address/ Web Site Address
CBE Technologies 50 Redfield Street Boston, MA 02122	043267622 0001	Warren Nelson	617-265-4000 X230 Fax: 617-265-2854	warren@cbetech.com www.cbetech.com
CTA Commercial Systems, Inc. 6903 Rockledge Road, Suite 800 Bethesda, Maryland 20817	840797618 0013	Paul Barboza	301-581-3204	pbarboza@cta.com www.cta.com
DSD Laboratories, Inc. 75 Union Street Sudbury, MA 01776	042659094 0001	Michael Sicuranza	978-443-9700 Fax: 978-443-9738	mas@dsdlabs.com www.dsdlabs.com
Farrington Associates, Inc. 460 Totten Pond Rd Waltham, MA 02451	043233597 0001	Thomas Farrington	781-487-7054 Fax: 781-487-7444	tfarrington@fainc.com www.fainc.com
Intermetrics, Inc. 23 Fourth Avenue Burlington, MA 01803	042448936 0009	Richard Prussman	781-221-6990 Fax: 781-221-6991	prussman@inmet.com www.intermetrics.com
Vikor (formerly Mehta Corporation) 175 Cabot Street, Suite 420 Lowell, MA 01854	043141660 0008	Bob Sharp	978-275-0532 Fax: 978-275-0505	rsharp@vikor.com www.vikor.com
New Horizons Software, Inc. 128 Warren Street Lowell, MA 01852	043238841 0008	Robert LeFaiver	978-934-9193 Fax: 978-934-9176	lefaiver@icpl.com www.nhsijava.com
Renaissance Worldwide 225 Franklin Street, 17 th Floor Boston, MA 02110	042920563 0003	Ted Lyon	617-338-9119 Fax: 617-210-8188	tlyon@rens.com www.rens.com
Sumaria Systems, Inc. 99 Rosewood Drive Danvers, MA 01923	042770369 0002	Chandu Shah	978-739-4200 Fax: 978-739-4950	cshah@sumaria.com www.sumaria.com
Systems Resources Corporation 128 Wheeler Road Burlington, MA 01803	042889762 0006	Denis Granville	781-270-9228	denis.granville@srcorp.com www.srcorp.com
Titan Software Systems 1115 Elkton Drive, Suite 200 Colorado Springs, CO 80907	943284583 0002	Thomas Konchan	719-528-1800	tkonchan@titan.com www.cst.titan.com

For additional information regarding IV&V Vendors, please see OSD update #99-28

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE FOR ADMINISTRATION AND FINANCE

INFORMATION TECHNOLOGY DIVISION

ONE ASHBURTON PLACE, ROOM 801, BOSTON, MASSACHUSETTS 02108

"YEAR 2000 INDEPENDENT VERIFICATION AND VALIDATION SERVICES"

OSD RFR NUMBER ITS04

INDEPENDENT VERIFICATION & VALIDATION PMT

COMMONWEALTH OF MASSACHUSETTS
INFORMATION TECHNOLOGY DIVISION

JUNE 10, 1998

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ATTACHMENTS

ATTACHMENT A	INDEPENDENT VERIFICATION AND VALIDATION SUBMISSION MATRIX
ATTACHMENT B	PRICING TABLES
ATTACHMENT C	MANDATORY FIRM OFFER
ATTACHMENT D	YEAR 2000 WARRANTY CERTIFICATION FORM
ATTACHMENT E	CHECKLIST SUMMARY <ul style="list-style-type: none"><input type="checkbox"/> STANDARD COMMONWEALTH TERMS AND CONDITIONS<input type="checkbox"/> STANDARD CONTRACT FORM<input type="checkbox"/> MASSACHUSETTS SUBSTITUTE W-9 FORM<input type="checkbox"/> CONTRACTOR AUTHORIZED SIGNATURE VERIFICATION FORM<input type="checkbox"/> AFFIRMATIVE ACTION PLAN FORM

NOTE: The partial list of Attachments referenced above in the "Attachment E, Checklist Summary" are attainable through Comm-PASS @ www.comm-pass.com

RFR TRANSMITTAL LETTER

To: Interested Vendors

From: Marcia R. King, Procurement Team Leader (PTL), Independent Verification & Validation

Date: 06/10/98

Subject: **INDEPENDENT VERIFICATION AND VALIDATION – ITS04**

The Independent Verification & Validation Procurement Management Team (IVV PMT or PMT) is issuing this RFR as a procurement mechanism for all government entities in the Commonwealth of Massachusetts.

The statewide master services agreement will be awarded to multiple Independent Verification & Validation Bidders to provide a combination of best value and technical ability on Year 2000 Independent Verification & Validation services. The selected Bidders may be contracted to provide additional services including, but not limited to, assessment plans, risk management assessment and department Y2K summary.

The schedule of events for this solicitation, subject to amendment by the PMT, is:

EVENT		DATE	TIME
Open Solicitation Announcement in Comm-PASS		06/10/98	
Release of RFR to Comm-PASS	(Mon.)	06/10/98	3:00 PM
Bidder's Conference	(Fri.)	06/19/98	10:00 AM
Bidder's Written Questions Due Date	(Fri.)	06/26/98	3:00 PM
IVV PMT Answers to Bidder's Questions	(Thurs.)	07/02/98	3:00 PM
Initial RFR Response Open Date	(Fri.)	07/10/98	3:00 PM
Initial RFR Response Close Date	(Fri.)	07/24/98	3:00 PM
Completion of Evaluations (estimated) (First Awards Issued)	(Fri.)	07/31/98	

All notifications, releases, and amendments to this RFR will utilize the **Commonwealth Procurement Access & Solicitation System (Comm-PASS)**. Visit on the Internet at: <http://www.comm-pass.com/> or contact Comm-Pass via phone: 1-888-Ma State (888-627-8283) E-mail: Comm-Pass@state.ma.us.

PART 1 – RFR GENERAL INFORMATION AND MANDATORY TERMS AND CONDITIONS

1.0 PURPOSE OF THE PROCUREMENT

The Independent Verification and Validation Procurement Management Team (IVV PMT or PMT) is issuing this RFR as a procurement mechanism for government entities in the Commonwealth.

1.1 GENERAL INFORMATION

1.1.1 The terms of 801 CMR 21.00: Procurement of Commodities and Services are incorporated by Reference into this RFR. Words used in this RFR **shall** have the meanings defined in 801 CMR 21.00. Additional definitions **may** also be identified in this RFR. All terms, conditions, requirements, and procedures included in this RFR **must** be met for a Response to be determined responsive. If a Bidder fails to meet any material term, condition, requirement or procedure, its RFR Response **may** be deemed unresponsive and disqualified. The Bidder should note that the RFR contains two (2) different types of RFR specification language:

1.1.1.1 If the RFR section is prefaced with language such as: **“shall,” “will,” “will not,” “may not,” “can only,” “prohibited,” “must,” and “required,”** the Bidder **will** consider the section to be **“mandatory,”** or in other words critical for meeting the basic requirements to be considered for a statewide contract as the Selected Bidders.

1.1.1.2 If the RFR section is prefaced with language such as: **“may,” “could,” “suggested,” and “requested,”** the Bidder will consider the section to be **“desirable,”** or in other words optional for Bidder to respond to the statewide contract.

1.1.2 Unless otherwise specified in this RFR, all communications, Responses, and documentation **must** be in English, all measurements **must** be provided in feet, inches, and pounds and all cost proposals or figures **must** be in U.S. Currency. All Responses **must** be submitted in accordance with the specific terms of this RFR. Electronic Responses may not be submitted in response to this RFR.

1.1.3 Concerning this RFR, Bidders are **prohibited** from communicating directly with any member of the PMT except as specified in this RFR, and no other individual Commonwealth employee or representative is authorized to provide any information or respond to any question or inquiry. Bidders **may** contact the Procurement Team Leader (reference RFR Section 1.6.1) or designee for this RFR in the event this RFR is incomplete or the Bidder is having trouble obtaining any required attachments electronically through Comm-PASS.

1.1.4 The Procurement Team Leader (PTL) **may** provide reasonable accommodations, including the provision of informational material in an alternative format, for qualified Bidders with disabilities or other hardships. Bidders requiring accommodation **shall** submit requests in writing, with supporting documentation justifying the accommodation, to the PTL. The PTL reserves the right to grant or reject any request for accommodation.

1.1.5 All Responses and information submitted in response to this RFR are subject to the Massachusetts **Freedom of Information Law**, M.G.L., Chapter 66, Section 10, and to Chapter 4, Section 7, Subsection 26, regarding public access to such documents. Any statements which reserve confidentiality or privacy rights in submitted Responses, or are otherwise inconsistent with these statutes, will be void and disregarded.

1.1.6 The Commonwealth makes no guarantee that any commodities or services will be purchased from any Contract resulting from this RFR. Any estimates or past procurement volumes referenced in this RFR are included only for the convenience of Bidders, and are not to be relied

upon as any indication of future purchase levels. The Commonwealth does not guarantee any minimum quantity of purchases from any Contract resulting from this RFR.

- 1.1.7 Unless otherwise clearly stated in this RFR, any reference to a particular trademark, trade name, patent, design, type, specification, producer or supplier is not intended to restrict this RFR to any manufacturer or proprietor or to constitute an endorsement of any good or service. The IVV PMT **may** consider clearly identified offers of substantially equivalent goods and services submitted in response to such reference.
- 1.1.8 If a Bidder is unable to meet any of the specifications required in this RFR, the Bidder's Response **must** include an alternative method for meeting such specification by identifying the specification, the proposed alternative and thoroughly describing how the alternative achieves substantially equivalent or better performance to the performance required in the RFR specification. The IVV PMT will determine if a proposed alternative method of performance achieves substantially equivalent or better performance. The determination of the IVV PMT on the Bidder's proposed alternative method **will** be final.
- 1.1.9 The goal of this RFR is to provide the best value of commodities and services to achieve the procurement goals of the IVV PMT. Bidders proposing alternatives which provide substantially better or more cost-effective performance than achievable under a stated RFR specification or Bidders that propose discounts, uncharged commodities and services or other benefits in addition to the RFR specifications **may** receive a preference or additional points under this RFR as specified.
- 1.1.10 The IVV PMT and a selected Bidder **may** negotiate either during a renewal period or as business conditions require, a change in any element of Contract performance or cost identified in the original RFR or the selected Bidder's or Contractor's RFR Response which results in lower costs or better value than was presented in the selected Bidder's or Contractor's original RFR Response.
- 1.1.11 All Responses **must** be presented using the same numbering and ordering sequence used in this RFR or as otherwise specified.
- 1.1.12 Costs which are not specifically identified in the Bidder's Response, and included in the resulting Contract, **will not** be compensated. The Commonwealth **will not** be responsible for any costs or expenses incurred by Bidders responding to this RFR.
- 1.1.13 If this RFR has been distributed electronically using the Comm-PASS system, it **shall** be the responsibility of every Bidder to check Comm-PASS for any addenda or modifications to this RFR. The Commonwealth and its subdivisions accept no liability and will provide no accommodation to Bidders who fail to check for amended RFRs and submit inadequate or incorrect Responses. Potential Bidders are advised to check the "last change" field on the summary page of RFRs for which they intend to submit a Response to ensure that they have the most recent RFR files.
- 1.1.14 Bidders **may not** alter (manually or electronically) the RFR language or any RFR component files. Modifications to the body of this RFR, its specifications, terms or conditions, especially those which change the intent of this RFR, are prohibited. Any unauthorized modifications may disqualify a Response.

1.2 COMMONWEALTH TERMS AND CONDITIONS & STANDARD CONTRACT FORM

All Bidders **will** be required to complete, execute and return the following two (2) documents:

1. The **Commonwealth Terms and Conditions**. If the Bidder has already executed and filed the Commonwealth Terms and Conditions, please indicate this in your Response. The

Commonwealth Terms and Conditions shall be incorporated by reference into any Contract for commodities and services executed pursuant to this RFR. A Bidder is required to execute the Commonwealth Terms and Conditions only once.

2. The **Standard Contract Form** as follows:

- ☒ (a) included in the Bidder's RFR Response. Failure to return a completed and executed Standard Contract Form **will disqualify** the Bidder's Response.
- ☐ (b) upon selection for Contract negotiation and execution.

By executing the Standard Contract Form, the Contractor certifies under the pains and penalties of perjury that it has submitted a Response to a Request for Response (RFR) issued by the IVV PMT and that this Response is the Contractor's offer as evidenced by the execution by the Contractor's authorized signatory, that the Contractor's Response may be subject to negotiation by the IVV PMT, and that the terms of the RFR, the Contractor's Response and any negotiated terms shall be deemed accepted by the IVV PMT and included as part of the Contract upon execution of the Standard Contract Form by the Purchasing Agent, as authorized signatory.

1.3 ELIGIBLE GOVERNMENT ENTITIES

This statewide Contract may be used by all agencies of the **Commonwealth of Massachusetts**, including all Constitutional Offices, the Legislature, the Judiciary, Elected Offices, Public Institutions of Higher Education, the Military Division and Independent Public Authorities, and all other political subdivisions of the Commonwealth including cities, towns, municipalities, county governments, school districts and other service districts, and quasi-public agencies. In addition, not-for-profit vendors currently providing human and social services to the Commonwealth under contract, and other entities designated in writing by the State Purchasing Agent may use this statewide Contract.

1.4 CONTRACT TERM

- 1.4.1 Initial Term** - The initial term of the contract resulting from the IVV RFR is anticipated to start on the effective date of the Contract and continue through June 30, 2000.
- 1.4.2 Extensions** - For the Commonwealth of Massachusetts, the contract **will** include one (1) optional 12-month extension based upon the Bidder's performance, cost and business conditions.
- 1.4.3 Multiple Contractors** - The Procurement Team Leader, in consultation with the IVV PMT may elect to, after the Initial RFR Response Date, entertain additional Bidders proposals on a quarterly basis (10/98, 01/99, 03/99, 06/99). In that event that additional bidder(s) are selected, the Contract duration for the additional bidder(s) will run concurrently with the other Contractor(s) on the IVV Contract.

1.5 CONTRACTUAL ORDER OF PRECEDENCE

The selected Bidders **will** establish with the Commonwealth of Massachusetts the following order of precedence in regard to the execution of this Contract:

1. **Massachusetts Terms and Conditions;**
2. **Standard Contract Form;**
3. **Attachment D, Year 2000 Warranty;**
4. **RFR Issued by the Commonwealth and any subsequent amendments; and**
5. **Bidder Response Content.**

The specifications and contents of the successful Bidder's proposal **will** become part of any contract awarded.

1.6 PROCUREMENT TEAM LEADER/CONTACT PERSON

- 1.6.1 Marcia R. King, Procurement Team Leader (PTL)**, shall be the main contact for any Contract resulting from this RFR. The PTL shall have the final authority, with the consultation of the IVV PMT, in all operational matters pursuant to this Contract. The PTL must approve amendments, alterations, substitutions, or modifications to this contract prior to their implementation. The PTL will from time to time designate procurement/contractual responsibilities in her absence.

Comm-PASS Internet Address:

www.comm-pass.com

Purchasing Department:

Information Technology Division

Address:

One Ashburton Place, Rm 801

Boston, MA 02108

Telephone #:

617-973-0711

E-Mail or Internet Address:

marcia.king@state.ma.us

RFR File Name/Title:

Independent Verification & Validation

RFR File Number:

ITS04

Procurement Team Leader/Contact:

Marcia R. King

Procurement Team/Category:

Information Technology

- 1.6.2 Independent Verification & Validation PMT** - The members of the PMT perform several functions in regard to this RFR and the subsequent Contract with the Bidder. The functions may include but are not limited to research, evaluation, contract management/execution and performance management. The PMT members are as follows:

Ms. Marcia King
Information Technology Division

Mr. Anthony DelGrosso
Department of Revenue

Mr. Val Asbedian
Information Technology Division

Ms. Stephanie Sutliff
Department of Revenue

Mr. Gerard Polcari
Operational Services Division

Ms. Susan Foss
Office of the State Comptroller

Mr. Richard Burke
Department of Employment & Training

- 1.6.2 T. Louis Gutierrez, Chief Information Officer (CIO), Commonwealth of Massachusetts** shall have oversight for all information technology purchased in the Commonwealth of Massachusetts. The CIO shall forward policy directives affecting the purchase of Year 2000 Independent Verification & Validation services in the Commonwealth of Massachusetts pursuant to this Contract. The CIO and PTL will meet periodically on all operational, business, legal and policy issues affecting the Year 2000 IVV services from this Contract.

1.7 ACCOUNT MANAGER

Commonwealth of Massachusetts Account Manager -The Bidder must provide in its RFR Response, the name of an individual who will be the Account Manager for the term of the resulting Contract. The Account Manager will be responsible for proper operation and administration of the

Contract by the Contractor. The Account Manager **shall** respond in a timely manner in writing unless instructed otherwise, to all information requests from the PTL. The Account Manager **shall**, upon request, attend meetings at the Information Technology Division (ITD) or at other sites, as requested by the PTL. The Account Manager **will** be responsible for reports required in this RFR and to serve as liaison between the Contractor and ITD and the eligible government entities. The IVV PMT **may** require the Contractor to relieve and replace the Account Manager if in the IVV PMT's opinion it appears that:

- The Account Manager does not perform at the applicable skill level specified in the Contract;
- The Account Manager does not deliver work which conforms to the performance standards stated in the Contract; and/or
- Personality conflicts with the Account Manager hinder effective functioning of the Contract.

1.8 PRIME BIDDER AND SUBCONTRACTOR(S)

The Commonwealth **requires** a single point of contact resulting from this RFR. Subcontractors **may** be used, but the Prime Contractor **must** accept full responsibility for any subcontractor's performance. Bidders **must** provide a list of all subcontractors, a description of each subcontractor's responsibilities and signed letters of agreement between the Bidder, as the Prime Contractor, and its subcontractor(s) identifying their responsibilities and their relationship to the Prime Contractor. The Bidder **must** notify the PMT on any subcontractor changes, additions and deletions throughout the term of the Contract. The PMT has the right to approve/reject any subcontractors.

The Bidder, as Prime Contractor, **shall** be responsible for meeting all of the terms of any contract resulting from this RFR.

1.9 INSTRUCTIONS FOR SUBMISSION OF RFR RESPONSES

The Bidder **may** respond to the initial IVV RFR solicitation period starting on Friday, July 10, 1998 at 3:00 PM and ending Friday, July 24, 1998 at 3:00pm. The RFR Response must be sealed, labeled, and submitted to ITD with the following address and RFR #ITS04:

Ms. Marcia R. King
Procurement Team Leader - Independent Verification & Validation
Information Technology Division
One Ashburton Place, Room 801
Boston, MA 02108
Attention: OSD RFR ITS04

- 1.9.1 **Paper Submission** - The Bidder **must** submit one (1) original Response to the RFR and six (6) copies on 8 1/2" x 11" paper in three (3) ring binders. Both the original and copies **must** be submitted on recycled paper. All RFR Response copies should be printed double-sided.
- 1.9.2 **Reduction of Non-recyclable or Non-reusable materials** - The Bidder is **requested** to minimize the use of non-recyclable or non re-usable materials such as plastic dividers, vinyl sleeves and GBC binding. Bidders are encouraged to use other products, which contain recycled content in their bid documents. Such products **may** include, but are not limited to, folders, binders, paper clips, envelopes, boxes, etc. Unnecessary samples, attachments, or documents not specifically requested in the RFR should not be submitted.
- 1.9.3 **Electronic Submission** - The Bidder **must** submit 7 copies of the RFR Response on 3.5" diskette. The Bidder **must** use Microsoft® Word for Windows95, Version 7.0 or lower and Microsoft® Excel for Windows95, Version 7.0 or lower. All copies of the electronic submission **must** be identical to information provided by the Bidder on the corresponding disk(s). (Reference RFR Section 1.10.1) **In the event of a discrepancy between a paper submission and**

electronic submission on disk, the paper submission will prevail. The Bidder is requested to label all disks including the following information: Bidder name, address, contact name, telephone number and RFR# ITS04. The bidder **must** guarantee that all electronic submissions be virus-free.

1.9.4 INDEPENDENT VERIFICATION AND VALIDATION Submission Matrix (Attachment A) - The Bidder is **required** to complete the IVV Submission Matrix.

1.9.5 Check-off Summary - The following check-off summary provides the **required** content and sequential order in which the Bidder's RFR Response package **must** be presented to the IVV PMT.

- ☐ **Bidder's Letter of Transmittal** - Cover letter with this RFR, signed by the individual on Contractor's Authorized Signature Verification Form issued with this RFR. The Bidder **must** clearly state that its RFR Response unconditionally guarantees that all mandatory specifications are accepted and that the Response complies with the IVV requirements. The Bidder is **requested** to clearly state in its RFR Response which specifications are responsive to desirable proposed goods and services. If an alternative is proposed, the Bidder **must** identify the original specification and alternative proposal.
- ☐ **Attachment A - Independent Verification And Validation Submission Matrix**
- ☐ **Bidder's RFR Response**
- ☐ **Attachment B - RFR Cost Tables**
- ☐ **Attachment C - Mandatory Firm Offer**
- ☐ **Attachment D - Year 2000 Warranty Certification Form**
- ☐ **Attachment E - Checklist Summary**
 - ♦ **Standard Commonwealth Terms and Conditions** - The Bidder **must** complete and sign this contract according to its preceding "Instruction" page. The document must be unconditionally signed, and submitted without alteration. If the provisions in this attachment are not accepted in their entirety without modification, the entire proposal offered in response to this solicitation **may** be deemed non-responsive.
 - ♦ **Standard Contract Form** - By executing this document, the Bidder certifies, under the pains and penalties of perjury, that it has submitted a Response to this RFR that is the Bidder's Offer as evidenced by the execution of its authorized signatory, and that the Bidder's Response **may** be subject to negotiation by the IVV PMT. Also, the terms of the RFR, the Bidder's Response and any negotiated terms **shall** be deemed accepted by the Operational Services Division and included as part of the Contract upon execution of this document by the Purchasing Agent.
 - ♦ **Massachusetts Substitute W-9 Form** - (If a Bidder has already submitted a W-9 form and has received a valid Massachusetts Vendor Number, the W-9 form is not required). If necessary, the Bidder must complete, sign, and submit the W-9 form. This form is **required** by the Office of the Comptroller for Taxation Reporting Information and is used to assign or confirm a Massachusetts Vendor Number. A Contract cannot be executed without a valid Massachusetts Vendor Number on file with the Commonwealth. Business enterprises **must** complete Employer Identification Number only. Individuals who report income

through their Social Security Number must complete Social Security Number only. The information on this form will be used to record your place of business and where payments under a state contract will be sent.

- ◆ Contractor Authorized Signature Verification Form
- ◆ Affirmative Action Plan Form
- **Certificate of Tax Compliance** - Bidder must certify compliance with all Federal and Commonwealth tax laws, including M.G.L. Chapter 62C Paragraphs 49A. The Bidder may do this as a certification statement. Bidders that are based in Massachusetts or derive an income in Massachusetts are encouraged to apply for a Certificate of Tax Standing. Bidders should submit an application to:

The Certificate Unit
Massachusetts Department of Revenue
200 Arlington Street
P.O. Box 7066
Chelsea, MA 02114
(617) 887-6555

1.10 CANCELLATION OF THIS PROCUREMENT

The Commonwealth may cancel this RFR at any time. (Reference 801 CMR 21.06 (7) Procurement Cancellation)

1.11 CONTRACT AWARD

The PMT shall evaluate all Bidders' Responses meeting the requirements of the RFR, and make award(s) to the Bidder(s) whose RFR Response provides the best value to the Commonwealth. The IVV PMT reserves the right to secure identical services from other Bidders.

1.12 NO GUARANTEE TO PURCHASE

The Commonwealth makes no guarantee that any purchases will take place from any contract resulting from this RFR.

1.13 EVALUATION OF RFR RESPONSES AND AWARD

1.13.1 Review of Bidder RFR Responses - RFR Responses that are submitted during the Initial RFR Response period (Friday, July 10, 1998 through Friday, July 31, 1998) and are responsive to all the requirements of the RFR will be evaluated against the PMT Evaluation Criteria. The IVV PMT will consider the following evaluation criteria during its review of Bidder's RFR specifications:

- IVV Specifications;
- Business Specifications;
- Cost Specifications; and
- Performance/Reporting Requirements.

1.13.2 Interviews – The IVV PMT may invite Bidders to interview with the IVV PMT. The interview will include, but is not limited to, a presentation from the Bidder, discussion on the Bidder's RFR response, IVV Past Work experience, and questions and answers.

1.13.3 Selection - The Commonwealth intends to qualify multiple Bidders. The IVV PMT intends initially to make a multiple awards to the most responsive Bidder(s) that meet the minimum requirements

of this RFR and Year 2000 IVV services and features that will serve the best interests of the Commonwealth.

1.13.4 Award - The Commonwealth will award multiple contracts to the Bidder whose RFR Responses that best meets the requirements for price, value, and is in the best interests of the Commonwealth.

1.14 PROPOSAL ACCEPTANCE PERIOD

The Bidder's proposal **must** remain in effect for at least 90 calendar days from the deadline for submission of the proposal.

1.15 DEFINITIONS

"American National Standards Institute" (ANSI) - An organization that maintains standards on many different topics. American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

"ANSI X.12.850" - ANSI Purchase Order Format

"Bidder" - Selected Bidders.

"Commonwealth" - Commonwealth of Massachusetts.

"CMR" - Code of Massachusetts Regulations.

"Commencement Date" - The date on which the programs are delivered by Selected Bidders as ordered.

"Contractor" - An individual or organization that enters into a Contract with a Department or the Commonwealth of Massachusetts to provide commodities or services and is listed in the MMARS vendor file (see following definition of MMARS). For the purposes of this RFR, "Statewide Contractor for Software and Services" refers to Contractors selected to provide services under contract Price Agreement ITS04 (Software License Purchases); Master Service Agreement BT8H031 (Software Services - Technical Support/Education/Training); and BT8L411 (Software Services - Maintenance and Upgrades).

"Desirable" - RFR specifications prefaced with language such as: **"may," "could," "suggested," and "requested,"** will be considered by the Bidder to be "desirable," or in other words optional for the Bidder to respond to the statewide contract as the Selected Bidders.

"Documentation" - The user guides and manuals for installation and use of the program software. Documentation is provided in CD-ROM, diskette, or bound form, whichever is generally available.

"Employment Base" - Employees that are taxed by the Commonwealth.

"Enrolling Customer" - Defined as (a) the Lead Customer; (b) any Lead Customer Affiliate and/or identifiable division, business unit, office location or eligible government entity defined in RFR section 1.3 Eligible Government Entities.

"Evaluation Software" - Fully functional software that is distributed by the Selected Bidders for testing, evaluation and training purposes. The eligible government entity is not required to return the evaluation software and is permitted to register the software with the Selected Bidders for future upgrades. The evaluation software has no value since the Selected Bidders is distributing software that is not fully licensed and contains no liability to the Selected Bidders and no warranty to the government entity.

"Fiscal Year" - The year beginning with July first and ending with the following June thirtieth as defined in M.G.L. Chapter 4, Section 7. This may also be referred to as the "State Fiscal Year."

"Internet" - In general, a collection of networks connected to each other using TCP/IP technology.

"Internet Protocol" (IP) - The network layer for the TCP/IP protocol suite widely used on Internet. IP is a connection less, best-effort packet switching protocol. It provides packet routing, fragmentation and re-assembly through the datalink layer.

"Independent Verification & Validation" (IVV) - IVV is a process to determine that the requirements for a project, be it software, embedded chip or hardware, are implemented correctly and completely and are traceable to system requirements. Usually performed by an independent third party.

"Lead Customer" - Commonwealth of Massachusetts.

"Mandatory" - RFR sections prefaced with language such as: **"shall," "will," "will not," "may not," "can only," "prohibited," and "required,"** will be consider by the Bidder to be "mandatory," or in other words critical for meeting the basic requirements to be considered for a statewide contract as the Selected Bidders.

"M.G.L." - Massachusetts General Laws

"MMARS" - The Massachusetts Management Accounting and Reporting System established by the Office of the Comptroller pursuant to M.G.L. Chapter 7A, Section 7. All payments to Contractors are processed and recorded in MMARS. Contractors are listed in a vendor file in MMARS by their tax identification number.

"Named User" - An individual authorized by the customer to use the programs on the designed systems, regardless of who is actively using the programs at any given time.

"Open Buying on the Internet (OBI) Standard" - An Internet Business Consortium to provide access to easy-to-use, open, standards-based Internet purchasing solutions for the procurement of high-volume, low-dollar, indirect goods and services. The "Internet Purchasing Roundtable" completed version 1.0 of the OBI standard that includes a generic set of requirements, an architecture, and an exact technical specification. For additional information or a copy of version 1.0 of the OBI standard, please visit the Consortium Web Site at: <http://www.supplyworks.com/obi> or soon to be <http://www.obi.org>

"Operational Services Division (OSD)" - A Department of the Commonwealth, within the Executive Office for Administration and Finance, established pursuant to St. 1989, Chapter 731, which is responsible for the management and oversight of procurement activities in the Commonwealth of Massachusetts.

"Payment Cycle" - The Commonwealth's payment cycle is thirty (30) calendar days from receipt of a properly submitted invoice by the Statewide Contractor. A Department or the Commonwealth will not incur late penalty interest charges provided payments are issued within this period but may pay in a shorter period to take advantage of prompt payment discounts.

"Procurement Management Team" (PMT) - Representatives from various Departments that design procurements, develop specifications, conduct solicitations and award contracts. The PMT also monitors Contractor performance and the level of customer satisfaction throughout the life of the Contract, or may delegate this effort at their discretion.

"Program Office for Y2K" - The Y2K Program Office ensures accurate monitoring of the Commonwealth's progress in meeting the Year 2000 challenge; identifying risk areas and risk mitigation activities; disseminating lessons learned to state agencies; and serving as a Year 2000 resource to all Commonwealth agencies and departments.

"Program" - The software including media, documentation and updates distributed by the Selected Bidders for which the government entity is granted a license pursuant to this RFR.

"Selected Bidders" - Bidder.

"Transmission Control Protocol" (TCP) - A common transport layer protocol used on the Internet. TCP is built on top of Internet Protocol (IP) and is nearly always seen in the combination TCP/IP (TCP over IP). It adds reliable communication, flow-control, multiplexing and connection-oriented communication.

"Update" - A subsequent release of the Program which the Selected Bidders or Software Publisher generally makes available for program licenses with or without an additional license fee, provided that the government entity has ordered the appropriate support for such licenses for the relevant time period. Update shall not include any release, options or future product which Selected Bidders or Software Publisher licenses separately.

"Value Added Services and Features" - The RFR contains some very specific procurement protocols and mandatory Responses from the Bidder. The IVV PMT has left room for Selected Bidders to differentiate themselves through value-added services and features.

"Year 2000 Compliant" - Year 2000 compliant means information technology that accurately processes date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations. Furthermore, Year 2000 compliant information technology, when used in combination with other information technology, shall accurately process date/time data if the other information technology properly exchanges date/time data with it.

1.16 SEVERABILITY

If any section of the IVV RFR or subsequent contract is deemed to be unenforceable or not compliant with the Laws of the Commonwealth of Massachusetts, that section shall be considered null and void in the applicable political entity. The remainder of the contract shall remain in full force and effect. If a section of the Selected Bidders Contract is voided, the IVV PMT and the Contractor shall negotiate replacement Contract language to make the Selected Bidders Contract compliant. If the parties fail to negotiate replacement language, the Commonwealth may exercise its rights under Termination for Convenience, Commonwealth of Massachusetts Terms and Conditions.

PART 2 – IVV PROCUREMENT -- SCOPE & SPECIFICATIONS

2.0 PROCUREMENT SCOPE

The Information Technology Division (ITD) has been assigned the responsibility of overseeing the Commonwealth's effort to coordinate and manage the implementation of the century date change on systems, both PC based and mainframe, networks, and agency infrastructures. As part of this process ITD is seeking multiple contractors to conduct Independent Verification & Validation (IVV) services, for Massachusetts state agencies to ensure their Year 2000 compliance is completed in a satisfactory and timely manner.

The verification and validation process is expected to evaluate the various systems or products to ensure that they meet all the ITD Year 2000 compliance requirements. Every level of the evolving system, from the lowest level component up to the total assembled system is verified against previously defined requirements.

- The IVV contractor will conduct an independent verification and validation of project plans, work products, and deliverables for the contracted agency
- The IVV contractor will perform the tasks necessary to ensure that project plans, work products and deliverable are of the highest quality consistent with the project requirements, and goals
- Ensure that project risks and anomalies in project plans, work products and deliverable are identified as early as possible to allow for effective and timely resolution
- Ensure that steps for correcting anomalies and mitigating risks are identified, documented, and communicated in a timely manner so as to reduce the negative impact of such anomalies and risks on the success of the overall project

The IVV Bidders RFR response must describe the IVV bidders strategy/approach, methodology, and tools, to include a task list necessary to perform the IVV services and products, and a final report. Use of non-proprietary methodology and tools is preferred.

The IVV Bidder may identify additional IVV services and deliverables or modify the IVV services and deliverables so long as the bidders proposed deliverables are consistent with the goals for IVV PMT. Any alternative service must be explained in detail in the bidder's offer, with specific justification for each alternative.

2.1 GENERAL BUSINESS SPECIFICATIONS

The following RFR sections highlight the critical minimum requirements for all Bidders on this RFR. The Bidder is required to respond in the "affirmative" that the company accepts the RFR sections noted below.

- The Bidder **must** submit a written certification statement that its gross annual income from all sources exceeds \$1 Million. The Bidder's Chief Financial Officer or Accounting Firm can attest to the facts in a certification statement on the appropriate letterhead. If necessary, the IVV PMT reserves the right to request additional information.
- The Bidder is **required** to identify its current employment and customer base. The Bidder is **required** to respond to the following items:
 - Identify the current employment base by number of Full Time Equivalent (FTE) employees. The Bidder's Chief Financial Officer or Accounting Firm can attest to the facts in a certification statement on the appropriate letterhead.
 - Identify the scope of the customer base within all eligible government entities in the Commonwealth (names, contract number)

- The Bidder **must** state whether or not it or any subcontractor has filed for bankruptcy protection within the previous two (2) years. If it has, the vendor must explain the circumstances.
- The Bidder **must**, at a minimum, have three years experience in Independent Verification and Validation business services to government or private industry.
- The Bidder **must** complete and sign the Mandatory Firm Offer (Attachment C) of this RFR. By signing Attachment C, the Bidder certifies that this firm offer meets all of the required specifications, requirements and procedures in this RFR.
- The Bidder **must** function as the single point of contact for the IVV PMT, Commonwealth department and the Information Technology Division, regardless of use of a subcontractor(s).
- The Bidder represents him/her to be an independent contractor offering such services to the general public and **shall not** represent him/her/ or his/her employees to be employees of the Commonwealth of Massachusetts or the Information Technology Division.
- Clarification of Responses - The IVV PMT **may** require the clarification of any mandatory and desirable Bidder RFR Response. The clarification could take the form of written correspondence and/or interviews by the PTL and/or the IVV PMT in order to discuss or clarify the Bidder's Response. Further, the PMT retains the right to visit any and all locations of a Bidder in order to evaluate the Bidder's RFR Response.
- Addenda to RFR - If it becomes necessary to revise any part of this RFR or if additional data is necessary to clarify any of its provisions, a supplement will be posted on Comm-PASS. The Commonwealth reserves the right to amend, alter or change the RFR at any time prior to the Award. (Reference RFR section 1.1.13)
- IVV Services Pricing - The Bidder, after signing the Contract, **must** adhere to all pricing included in the Contract unless otherwise indicated in this RFR or negotiated by the Procurement Team Leader and the IVV PMT.
- Fixed-Rate Quotes for IVV Services - The Bidder **must** adhere to and guarantee all prices quoted to departments unless both the department and contractor agree in writing to a change in the scope of services.
- Hourly Rates Ranges - Bidders are **required** to include in Attachment B - Pricing Tables, hourly rate ranges the department or agency will pay for Year 2000 IVV services. The hourly rate ranges **will** be fixed for the initial term of the contract (Reference RFR section 1.4.1). The hourly rate ranges may increase up to 3% in the extension year, starting July 1, 2000.
- Periodic Hourly Rates Range Verification - The Bidder **will be required** to present, at least on an annual basis, verification reports that certify that the Contract is compliant with its Hour Rate Ranges.
- Government Tax Exemption - All items covered under this Contract are exempt from sales tax. Therefore, requisition forms supplied by the Awarded Bidder **must not** include a sales tax entry.
- Shipping and Delivery - Fee Exemption - All items covered under this Contract are exempt from shipping charges. The Bidder **must not** include shipping charges on any invoice.
- Procurement Cancellation - The IVV PMT retains the right to cancel this Procurement at any time before a Contract has been executed, in which event the Commonwealth will reject any and all Responses received in response to this RFR.

- Bidder Disqualification - If a Bidder fails to meet any consequential or material term, condition, requirement or procedure, its RFR Response **may** be deemed unresponsive and disqualified. (Reference RFR section 1.1.1)
- Bidder RFR Submissions - The RFR Responses and information received **will** become the property of the Commonwealth of Massachusetts.
- Default – Any event that includes, but is not limited to following events, may activate the default of the Contractor under this contract:
 1. Any determination by the PTL and the IVV PMT that the business relationship with eligible government entities has deteriorated;
 2. Any material misrepresentations made by Contractor; or
 3. Any failure by the Contractor to perform any of its obligations under this contract, including but not limited to, the following:
 - failure to commence performance of this contract at the time specified due to a reason or circumstance within the Contractor's reasonable control;
 - failure to perform this contract with sufficient personnel, software licenses, services or with sufficient material to ensure the completion of this contract within the specified time due to a reason or circumstance within the Contractor's reasonable control;
 - failure to perform this contract in a manner reasonably satisfactory to the PTL and the IVV PMT;
 - failure to promptly comply, within reasonable time, with requests for IVV services ;
 - discontinuance of the services for reasons not beyond the Contractor's reasonable control;
 - failure to negotiate replacement contract language after determination was made that a contract provision is void;
 - failure to comply with a material term of this contract, including but not limited to, provision of insurance and nondiscrimination; or
 - any other acts specifically and expressly stated in this contract as constituting a basis for termination of this contract.

2.2 IVV BUSINESS SPECIFICATIONS

- The Bidder **must** make available periodically, to the contracting department and/or the Information Technology Division, all information on IVV services covered by the contractor(s).
- The Bidder **shall** make available, in both hard and electronic versions, all documentation and reports developed by the contractor. The documentation and reports shall become the property of the Commonwealth of Massachusetts and retained by the department and Information Technology Division.
- The Bidder **shall** agree that all discussions or information gained shall be considered confidential and that no information gathered by the contractor shall be released to the general public without prior written consent of the department and review by the Information Technology Division.
- The Bidder and their subcontractor(s) **shall not** hire any Commonwealth of Massachusetts employee until the employee has been out of state government for one (1) year. The Bidder must refer any and all questions regarding employment of Commonwealth staff to the State Ethics Commission.
- The Bidder **will** perform all IVV specifications and services in a manner acceptable to the IVV PMT, contracting department and/or the Information Technology Division.

- The Bidder **will** work with the appropriate information technology professionals in each participating department and Information Technology Division staff as deemed appropriate.
- Each department **will** be responsible for providing all necessary workspace, office equipment, including a desktop computer for the selected Bidders staff.
- Each department **will** be responsible for providing the selected Bidder with access to all program files, libraries, personal computer based systems, software packages, network systems, security systems, and hardware as required to complete the contracted IVV services.
- The Bidder **must** obtain approval from the department before installing or utilizing any automated tools or software packages.
- The Bidder **must** participate in an introductory meeting with the information technology professionals from each department where the Bidder has secured a contract.
- The Bidder **must** participate in exit meeting with the information technology professionals from each department where the Bidder has secured a contract
- The Bidder **must** be able to provide qualified individuals to fill the technical positions identified in RFR section 2.4 IVV Personnel Specifications and in Attachment B – Cost Tables.
- The Bidder is **requested**, in narrative form, to demonstrate their capability by providing evidence of two (2) specific IVV service projects within the last two (2) years.
 - The Bidder is **requested** to provide a detailed description of the IVV service(s) performed by each individual, the length of time spent on each project including the start and end dates of each project, the specific systems environment, and the number of individuals who worked on each project.
 - The Bidder is **requested** to provide a statement summarizing the status of the project and if the project was completed to the client's satisfaction.
- The Bidder is **requested** to provide references for each IVV project described in the preceding paragraphs. The references provided by the Bidder **must** include the name of the company, address, contact person, telephone number, months and years of service. The IVV PMT will utilize the references to determine if the Bidder has the ability to provided the IVV services requested in this RFR.
- The Bidder **may not** reference any project(s) that were contracted by any member of the IVV PMT (reference 1.6.2).

2.3 IVV TECHNICAL SPECIFICATIONS

- The Bidder **must** describe the IVV strategy, approach, methodology and tools, include a tasks list necessary to perform IVV activities and produce the deliverables outlined below. The IVV PMT suggests that Bidders utilize non-proprietary methodologies and tools where ever appropriate..
- The Bidder's proposal to every department **must** include a preliminary schedule to accomplish the IVV activities and tasks to produce the minimum IVV deliverables required for each IVV engagement.
- The Bidder's proposal **may** identify additional IVV deliverables and value-added services and features, based on the Bidder's experience with other IVV proposals, project requirements or competitive environment. The additional deliverables **must** be specified at the time of Bidder(s) proposal to a contracting department. This proposal, including additional cost if any, **must** be

approved by the contracting department prior to inception of work.

- Minimum Bidder IVV Deliverables - The following deliverables have been identified by the IVV PMT as the minimum Bidder deliverables that are expected to be produced and are due on the dates(s) agreed to between the contractor(s) and the departments. An outline of each deliverable and criteria for acceptability will be developed and agreed upon prior to development of the document. The outline and criteria, with any mutually agreed upon changes, will be used to determine that acceptability of each deliverable.

IVV Activities	Deliverables
IVV Assessment Plan	IVV Assessment Plan, including: <ul style="list-style-type: none"> ♦ Purpose ♦ Scope of Work ♦ Referenced Documents ♦ Definitions ♦ IVV Overview ♦ Project Methodology and Tools
IVV Project Communication Plan	Monthly Status Reports, including: <ul style="list-style-type: none"> ♦ Summary of Current IVV activities ♦ Planned IVV activities for the next month ♦ New Issues and Risks ♦ Status of Open Issues and Risks ♦
IVV Risk Management Areas	IVV Risk Assessment, to include: <ul style="list-style-type: none"> ♦ Risk Assessment Method ♦ Documentation of Identified Risks ♦ Recommended Risk Mitigation Strategy ♦
IVV Department Summary	IVV Final Report, including: <ul style="list-style-type: none"> ♦ Summary of all IVV Activities ♦ Summary of Task Results ♦ Summary of Anomalies and Resolutions ♦ Lessons Learned/Best Practices ♦ Recommendations

2.4 IVV PERSONNEL SPECIFICATIONS

- The contractor **must** provide qualified personnel with experience in year 2000 consulting to conduct a verification and validation of Year 2000 processes. The IVV vendor's proposed project team **must** meet the following minimum qualifications:
 - IVV Project Manager **must** have a minimum of five (5) years of experience with a combination of two or more of the following: Business Process Reengineering; Information Systems development; IVV; Quality Assurance; requirements; definition; and analysis; Configuration Management; and Systems Engineering. The IVV Project Manager must have a least three (3) years of experience in IVV, preferably in a similar role.
 - IVV Team Members (excluding administrative support staff, if included in the offer) **must** have a minimum of three (3) years of experience with a combination of two or more of the following: Business Process Reengineering; Information Systems development; IVV; Quality Assurance; requirements; definition and analysis; Configuration Management; and Systems Engineering. IVV Team members must have at least one (1) years of experience in IVV.

- IVV Project Manager and Team Members **must** have experience with large information technology projects in a similar function/technical role. In addition, the Bidder's proposed Project Manager and Team Members **must** have experience with the IVV methodology and tools described in the vendor's offer.
- The Bidder **must** provide a statement certifying that they can provide the IVV personnel proposed in their responses to the personnel specifications over the term of the contract and how the Bidder will meet this commitment.
- The Bidder **must** agree in its RFR response that if the company requests to replace approved personnel on a contracting engagement, the Bidder will propose a replacement with equivalent or better experience at no additional cost to the department.
- The Bidder **must** agree in its proposal that if the IVV PMT, department or Information Technology Division is not satisfied with the performance of any of the approved personnel, the department will have the right to require the vendor to remove and replace such personnel.
- The IVV PMT **may** require the Contractor to relieve and replace the Project Manager if in the IVV PMT, department or Information Technology Division's opinion it appears that:
 - The Project Manager does not perform at the applicable skill level specified in the Contract;
 - The Project Manager does not deliver work which conforms to the performance standards stated in the Contract; and/or
 - Personality conflicts with the Project Manager hinder effective functioning of the Contract.
- The Commonwealth of Massachusetts reserves the right to approve or reject any of the contractor's proposed personnel.
- The Bidder **must** agree that no substitution of specified personnel identified in the contractor's proposal shall be made without written approval of the department

PART 3 – IVV PRICING SPECIFICATIONS

- 3.0 IVV PRICING SPECIFICATIONS (See Attachment B – Pricing Worksheet)
- The Bidder **must** respond using the pricing format outlined in Exhibits 1, 2 & 3.
 - The Bidder **must** include the price for IVV activities, task(s) and preparation of required deliverables based on the proposed approach, methodology, and tools.
 - The Bidder **must** complete and submit with the RFR response the IVV pricing specification matrix (Exhibit 1) in Attachment B. The Bidder **must** enter a range of costs by entering a rate in the low rate box and the high rate box for each personnel specification. The Bidder's price **must** include all standard business expenses (per diem, G & A, travel) that the Bidder incurs in connection with the IVV services.

Exhibit 1: IVV Project Team

IVV Position Title	Low Hourly Rate	High Hourly Rate
IVV Project Manager	\$0.00	\$0.00
IVV Team Member	\$0.00	\$0.00
IVV Administrative Support	\$0.00	\$0.00

- The Bidder after contract award, subject to the approval of the IVV PMT, **may** submit special requests to add personnel classifications. The Bidder **must** include a low rate and high rate along with a position description, a proposed candidate's resume and the IVV task(s) on which the proposed IVV service personnel will be utilized.
- The Bidder **must** list the position title, number of personnel, number of hours, and price per hour for each project team member included in the Bidders offer.

Important Note:

The PMT has included Exhibits 2 and 3 as a **suggested** uniform project methodology for both the contracting department and the IVV services contractor. The PMT pricing worksheet **may** be modified to meet the specific IVV services requirements of the contracting department.

Exhibit 2: IVV Project Team

IVV Position Title	Number of Personnel (by FTE)	Price Per Hour	Extended Price
Project Manager	0.0	\$0.00	\$0.00
Team Member #1	0.0	\$0.00	\$0.00
Team Member #2	0.0	\$0.00	\$0.00
Team Member #3	0.0	\$0.00	\$0.00
Administrative Support Staff	0.0	\$0.00	\$0.00
Total	0.0	\$0.00	\$0.00

Exhibit 3: IVV Activities and Deliverables

IVV Deliverables	Hours	Extended Price
IVV Assessment	0.0	\$0.00
IVV Project Communication Plan	0.0	\$0.00
IVV Risk Management Areas	0.0	\$0.00
IVV Department Summary	0.0	\$0.00
Additional Services/Features	0.0	\$0.00
Additional Services/Features	0.0	\$0.00
Total	0.0	\$0.00

- Valued-Added Services and Features - The Bidder **may** offer additional discounts and/or value-added services and features. The Bidder is **requested** to identify the cost methodology for the products, and/or services they are proposing in the RFR Response.
- When the selected Bidder provides a quote to the contracting department, based on the scope of services and deliverables, it **must** include hours and extended prices. The quoted rates for each contracting department are fixed for the term of the engagement, unless otherwise amended.

PART 4 – PERFORMANCE AND REPORTING REQUIREMENTS

4.0 CONTRACTOR PERFORMANCE AND REPORTING REQUIREMENTS

The IVV PMT is proposing to deliver a **best value** contract with multiple Bidder(s) that will facilitate the IVV needs of departments in the Commonwealth. Furthermore, the IVV PMT through this contract will establish a partnership with the Bidder, and the IVV PMT and the Bidder hereby agree to establish **performance and reporting requirements** to safeguard and ensure contract performance. The selected Bidder(s) should be aware that the IVV PMT **may** alter performance and reporting requirements during the term of this Contract to meet the needs of the Commonwealth.

4.1 IVV PMT – STATE FISCAL YEAR ANNUAL AND QUARTERLY REPORT SUBMISSION

The Bidder **must** deliver Annual and Quarterly reports to the IVV PMT within fifteen (15) calendar days after the close of a State Fiscal Year Quarter. The annual and quarterly reports will include all prior and current IVV services performed with the Commonwealth under this contract. If a submission deadline falls on either a Federal and State Holiday or non-business day (Saturday/Sunday) the report will be due on the **next business day**.

<u>Quarter Ending</u>	<u>Submission Deadline</u>	<u>Report Due</u>
September 30 th	October 15 th	Quarterly
December 31 st	January 15 th	Quarterly
March 31 st	April 15 th	Quarterly
June 30 th	July 15 th	Annual & Quarterly

4.2 REPORT FORMATS

- Paper Submission - The Bidder **must** submit one (1) original annual or quarterly report and two (2) copies on 8 ½" x 11" paper in three (3) ring binders. Both the original and copies **must** be submitted on recycled paper.
- Electronic Submission - The Bidder **must** submit reports on 3.5" diskette. The Bidder **must** use Microsoft® Word for Windows95, Version 7.0 or lower, Microsoft® Excel for Windows95, Version 7.0 or lower, and , Microsoft® Access for Windows95, Version 7.0 or lower. The Bidder **must** label all disks including the following information: Contractor, address, contact name, telephone number and Contract Number ITS04.

Notes

Lined area for notes, consisting of multiple horizontal purple lines.

Commonwealth of Massachusetts
Information Technology Division



**Massachusetts
Y2K Compliance Activities
Initiatives and Actions**

December 15, 1998

**Val Asbedian
Director, Strategic Planning Group**



MASSACHUSETTS Y2K COMPLIANCE ACTIVITIES INITIATIVES AND ACTIONS

INTRODUCTION

In early 1996, the Commonwealth of Massachusetts Information Technology Division (ITD) began a Year 2000 (Y2K) awareness program with the distribution of an ITD Year 2000 white paper to state agencies and entities. Various members of ITD's Strategic Planning Group (SPG) engaged in a number of other awareness activities and, in June 1997, SPG created a Year 2000 Program Management Office (Y2K PMO) to coordinate the Commonwealth's Year 2000 effort.

Charles D. Baker, Secretary of Administration and Finance, directed all Secretaries and Department heads in September, 1998, to treat Year 2000 compliance activities as their top operational planning priority.

Governor Argeo Paul Cellucci issued an Executive Order in December, 1998, making year 2000 activities the chief operational priority for state agencies, and specifically assigned these responsibilities to the head of each agency.

PMO ACTIVITIES

The Y2K PMO team consists of six full time staff, including a Y2K PMO Project Manager, and the Director of the Strategic Planning Group who is also the Y2K Program Manager. The purpose of the Y2K PMO is to help the CIO meet the goal of "uninterrupted turn-of-century service delivery". To support this effort the PMO is engaged in a number of activities to:

- Monitor statewide Year 2000 efforts and agency progress in meeting the Year 2000 challenge;
- Provide coordination and support to agency Y2K projects as required to promote risk mitigation activities; and
- Foster awareness and exchange of technical information.

MONITOR STATEWIDE YEAR 2000 EFFORTS AND PROGRESS

In July 1997, the Y2K PMO staff embarked on an effort to visit Commonwealth agencies to ascertain the status of Year 2000 projects and to identify the Commonwealth's mission-critical and essential systems. This first round of interviews established a baseline for measuring future progress, and identified risk areas.

As of July 1998, the PMO team has conducted three more rounds of interviews and initiated a fifth round to obtain update information on a quarterly basis. During the last quarter, the PMO team revisited all agencies to obtain a complete Y2K project update for the Commonwealth.

In order to facilitate data collection and monitor progress, the Y2K PMO has developed and maintains a database to track, by agency, Year 2000 assessment, planning, validation and deployment activities as well as the compliance status of Commonwealth mission-critical and essential systems. In addition, the PMO has developed a process for determining risk levels for systems and agencies, which reflect the status of information collected for a given quarter. Risk levels are coded as red for high schedule risk; yellow for medium; and green for low.

Currently, 83% of the nearly 450 systems being tracked are scheduled to meet the Commonwealth's remediate-and-return-to-production goal of January 31, 1999 for mission critical and May 31, 1999 for essential systems. Sixteen percent are still being analyzed and yet to be scheduled. One percent have scheduled completion dates extending into the July - November 1999 timeframe.

PROVIDE COORDINATION AND SUPPORT

The Y2K PMO provides coordination and support to the agencies of the Commonwealth in a number of ways:

- **Project Assistance**
Staff members in the Y2K PMO provide technical assistance in selecting tools for Year 2000 fixes. In addition, the PMO staff also provides planning assistance, as needed, in preparing or reviewing agency assessments and plans for addressing the Year 2000 challenge. For several executive level departments with a high percentage of mission critical agencies or Commonwealth mission critical systems, the PMO has assigned a team member as a liaison. The liaison attends department wide MIS meetings, Y2K meetings, and is in frequent touch with the appropriate agency and system managers. The liaison also helps the department and/or agencies to find solutions to Y2K resource and schedule problems.
- **Year 2000 Materials**
The Y2K PMO has produced a variety of materials that can be used by agencies in their Y2K projects. These include:
 - Year 2000 date standards, as well as other standards like the Commonwealth Y2K Standards and Guidelines for Information Technology which address hardware and software;
 - Information originally published by the state's procurement office which includes sample Year 2000 language for use in Requests for Proposals, guidance for contracts relating to interfaced, large, and/or critical systems, and a list of approved vendors who have signed a Year 2000 warranty agreement with the Commonwealth;
 - A list of the most frequently used commercial off-the-shelf software (COTS) and compliance information for these products;
 - A standard letter that agencies can send to vendors of COTS not commonly used and sample spreadsheets for tracking the compliance and replacement strategy of each product;
 - A standard letter to landlords requesting facility information from landlords of agencies renting space in non-state owned buildings;

- An Interface Management document which will provide agencies with tables they can use to inventory and track every interface for all their systems;
 - Agency Year 2000 Test Support Manual for agencies which develop and maintain systems that run on the ITD mainframe computer;
 - A compliance statement for agencies to perform a self-assessment of their status; and
 - A funding request process designed to help agencies needing additional monies for Y2K remediation to submit all the required information to support their request.
- Workshops
The Y2K PMO has developed two workshops to assist agencies with specific Y2K tasks:
 - In September 1997, the PMO organized a workshop which focussed on Year 2000 project management and assessment issues necessary for an effective Year 2000 project launch. The PMO included in the workshop a Sample Project Plan for the attendees to use to organize their projects.
 - In order to avoid agencies' 'reinventing the wheel', the PMO developed a workshop for testing PC's. Two workshops are offered, the first of which dealt with BIOS problems. A 2-hour workshop was offered 10 times over a 4 week period dealing with hardware issues. Recently, sessions were held that were directed at the software compliance issues PC owners are facing. Agencies sent as many of their technical staff as they chose and were encouraged specifically to send the staff members who will be testing their PC's. The PMO provided each attendee with a starter kit.

FOSTER AWARENESS AND EXCHANGE OF TECHNICAL INFORMATION

The Y2K PMO sponsors monthly meetings of the Massachusetts Government Year 2000 User Group. The User Group meetings, open to all agency and department staff, were established as a forum for agencies to share information and lessons learned regarding Year 2000 remediation and a place to get help with any problems they may be having. The Y2K PMO also hosts quarterly Year 2000 Days and vendor days which provide an additional means of disseminating current information on Year 2000 issues. Speakers at these events have included Microsoft, Oracle, Lucent Technology, Digital Equipment Corporation, the Gartner Group, and Banyan Systems.

The Y2K PMO maintains a Year 2000 Web site for Project information and useful links. The URL for this site is <http://www.state.ma.us/y2k>. The web site includes reference material and other PMO documents, such as Vendor Management information and the Standard Letter to Landlords. It provides Business Continuity and Contingency Planning models (templates), links to other web sites with helpful information, and frequently asked questions.

The PMO also contributes to or publishes Year 2000 technical and reference information:

- Each issue of ITD's quarterly Information Technology Bulletin contains material written by the PMO, about the Year 2000, starting with the Winter 1997 issue. The IT Bulletin is also available on the Web at <http://www.state.ma.us/itd/bulletin/>.
- In April 1997, ITD published the first edition of *Year 2000, Meeting the Challenge*, a reference book for the agencies. Requests for over 1500 copies of the book were received by ITD. In October 1997, the PMO published a second edition of *Year 2000, Meeting the Challenge*. It focused on the activities agencies should be involved in today if they are to meet the Year 2000 challenge and provided updated reference lists. The PMO is currently working on a third edition which will feature discussions on testing, risk management, and embedded systems in addition to providing updated reference lists.
- The Y2K PMO produced a white paper entitled, "PC BIOS and the Year 2000" which describes in simple terms what the PC BIOS 'problem' is, methods to test for it, ways to correct it, and the impact of not correcting it. The white paper was distributed to agency Y2K coordinators and is also available on the PMO's Y2K web site.
- A white paper addressing Y2K issues specific to cities and towns was published in October, 1998. In addition, articles are published monthly in "The Beacon", a Massachusetts Municipal Association publication distributed throughout the Commonwealth.
- The PMO also participates in a monthly interstate conference call which includes John Koshinen, the Federal government Y2K coordinator for the President.
- Monthly meetings are attended with Federal Agencies and other State Y2k coordinators to review progress, share information and coordinate activities.

Outreach to local and municipal governments and organizations has become a priority for the PMO. The Y2K PMO Program Manager has addressed several organizations including the Massachusetts Municipal Association and the Association of Government Accountants. Other members of the PMO participated in several quarterly Boston Millenium Association Meetings. The PMO is also encouraging agencies to conduct their own outreach programs to their constituents. For example, the Division of Banks and the Division of Insurance, agencies within the Office of Consumer Affairs, have been working with local banks/insurance companies to ensure that they will be ready for the Year 2000. Whenever possible, the PMO works with agencies that have alliances with local and municipal organizations to encourage and support these outreach efforts. For instance:

- The **Department of Education** is reaching out to the public schools in the Commonwealth. They have identified all the administrative software packages in use by all of the school districts across the state. The major vendors have been contacted regarding Y2K compliance of their products and DOE will disseminate the information to the school districts. DOE has also identified the most frequently used desktop software in the public school districts and is publishing

the compliance status of those products on its web site. DOE has identified a need to improve awareness in the school districts across the state and they are committed to devoting more resources to familiarize schools with the potential dangers of non-compliance.

- The **Division of Banks** within the Office of Consumer Affairs began an education campaign with the Commonwealth financial institutions in early 1997. Their annual examinations of these institutions include Y2K compliance questions. In addition, DOB has spoken on the Y2K issue at over 15 industry sponsored banking seminars. On a quarterly basis, the FDIC, in cooperation with DOB, examines banks and credit unions solely on Y2K compliance status. Any financial institutions experiencing problems with their Y2K efforts are examined more frequently. Recently, the DOB also surveyed non-bank licensees and has begun examining them on Y2K status on a regular basis.
- The **Division of Insurance**, also within the Office of Consumer Affairs, began an awareness campaign across Commonwealth-based insurers in mid-1997 with a survey. Based on the results of the survey, the DOI procured an independent consultant to audit each Massachusetts domestic insurer for Y2K compliance. The DOI expects to complete the audit by the end of this calendar year. Further actions may be taken based on the results of the audit.
- The **Department of Revenue** began an awareness campaign two years ago through speaking engagements at various meetings and conferences of local officials, such as the Massachusetts Municipal Association, Collector/Treasurer, Finance Committees, Accountants/Auditors, Management Information Directors, and Assessors. DOR also conducted telephone surveys of all 351 cities and towns on Y2K readiness. In addition, DOR publishes articles and reminders in every issue of *City & Town* and maintains a web page devoted to local government Y2K issues. DOR has mandated that, in order to have a FY99 tax rate set, communities must submit a report from their CFO on the Y2K compliance status of all major municipal computer systems.
- The **Division of Local Services (DLS)**, a part of the DOR, has initiated an outreach program targeted to the smallest cities and towns in the Commonwealth. A pilot program with 17 towns having populations under 5000 citizens has begun to determine the feasibility of providing more direct, on-site analysis and support of towns lacking sufficient staff to adequately perform year 2000 assessments for non-compliant systems, initiation of vendor management programs, development of community-specific risk management and contingency programs. DLS will also recommend remediation/replacement strategies for at risk systems.
- Over the past three years the **Department of Housing and Community Development** has been working with the local Housing Authorities across the state to raise Y2K awareness and monitor compliance. DHCD has discussed the Y2K issue at working group meetings, at conferences, and with the major housing software vendors in the Commonwealth. DHCD has contacted individually all of the Housing Authorities that they believe to be at high risk. They have also requested all Housing Authorities to verify their plans for achieving Y2K compliance before the end of CY99.

- The **Massachusetts Highway Department** within the Office of Transportation and Construction is especially concerned about traffic signals across the Commonwealth. The MassHighway planning controllers group that meets regularly with regional planning groups will be addressing Y2K issues, especially as it relates to traffic signals.
- In March 1998, the **Office of the State Auditor** mailed a packet of information to every city and town in the Commonwealth. The Y2K PMO provided the Auditor's Office with copies of their Y2K booklet, *Year 2000 Compliance, Meeting the Challenge, Second Edition*, to include in the packet. -
- **Massachusetts Emergency Management Agency (MEMA)**, of the **Department of Public Safety**, is the agency responsible for planning for all statewide emergencies. As a part of their normal emergency planning activities, the agency has initiated communication and preparedness activities. Among these activities are included educational activities for MEMA participating agencies, outreach activities to cities and towns normally included in all MEMA activities as well as participation with the **Federal Emergency Management Agency (FEMA)** on regional/New England planning.

SUMMARY

The Y2K PMO's goal is to ensure all Commonwealth agencies will be able to provide "uninterrupted turn-of-century service delivery". They are approaching this from many angles: monitoring agencies progress, providing information common to all agencies, providing support, and disseminating lessons learned information. The efforts of the PMO are paying off in terms of agency awareness and progress toward meeting our goals.

The PMO has taken a conservative approach to planning for remediation activities, and asked each agency to target completion of their work for January, 1999.

As of the close of the July - September 1998 quarter, The PMO had collected information on 266 mission critical systems and 191 essential systems identified in 169 agencies, with the following results:

- Approximately 74% of these systems were scheduled for completion by Jan. 1999.
- Approximately 4% of these systems had some risk of missing the January date.
- Approximately 19% of these systems were likely to miss the January date.
- The remaining 3% were not evaluated for this quarter.

All agencies are planning to have completed remediation or business continuity plans prior to the close of calendar 1999.



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